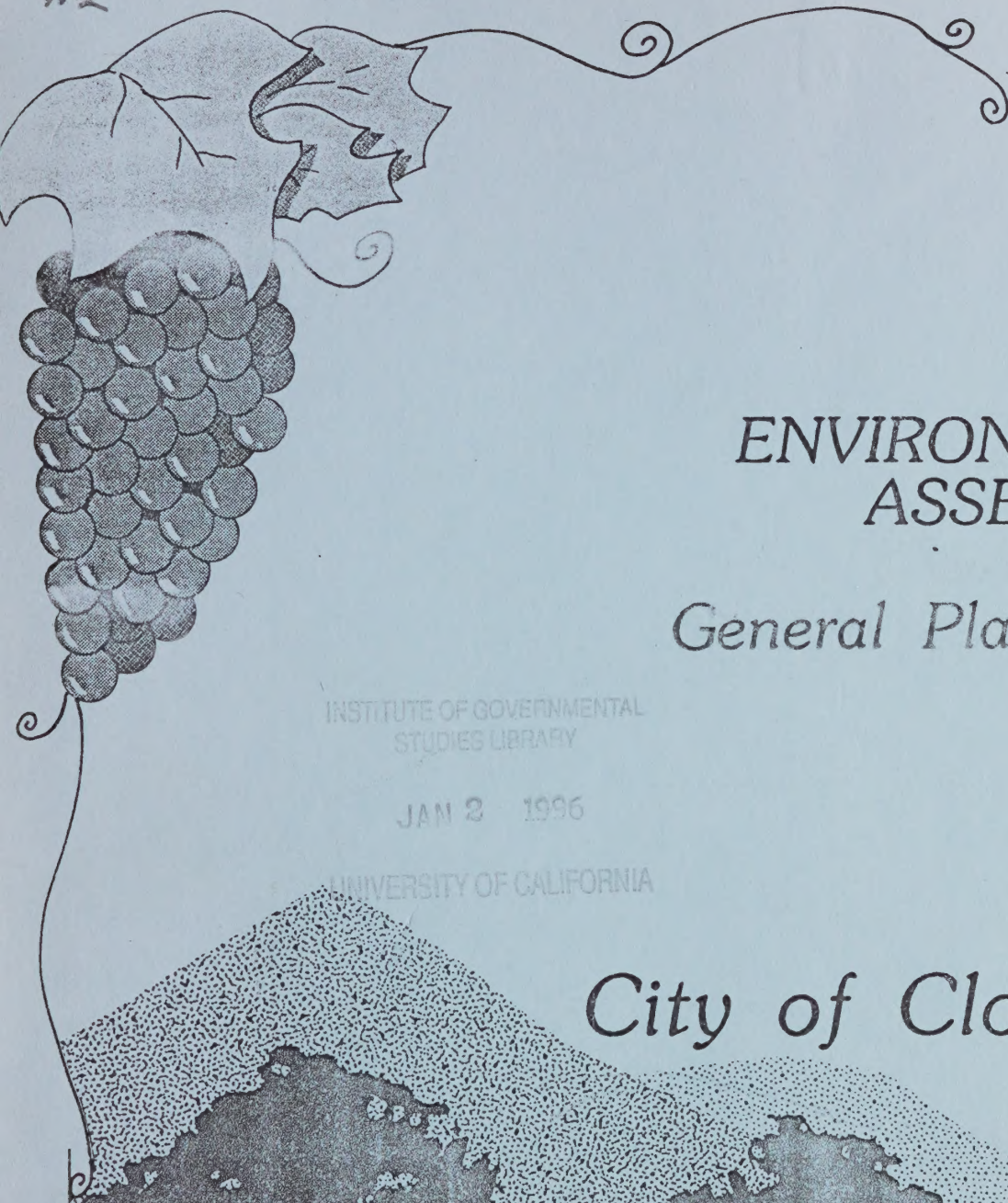


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# MASTER ENVIRONMENTAL ASSESSMENT

*General Plan Update*

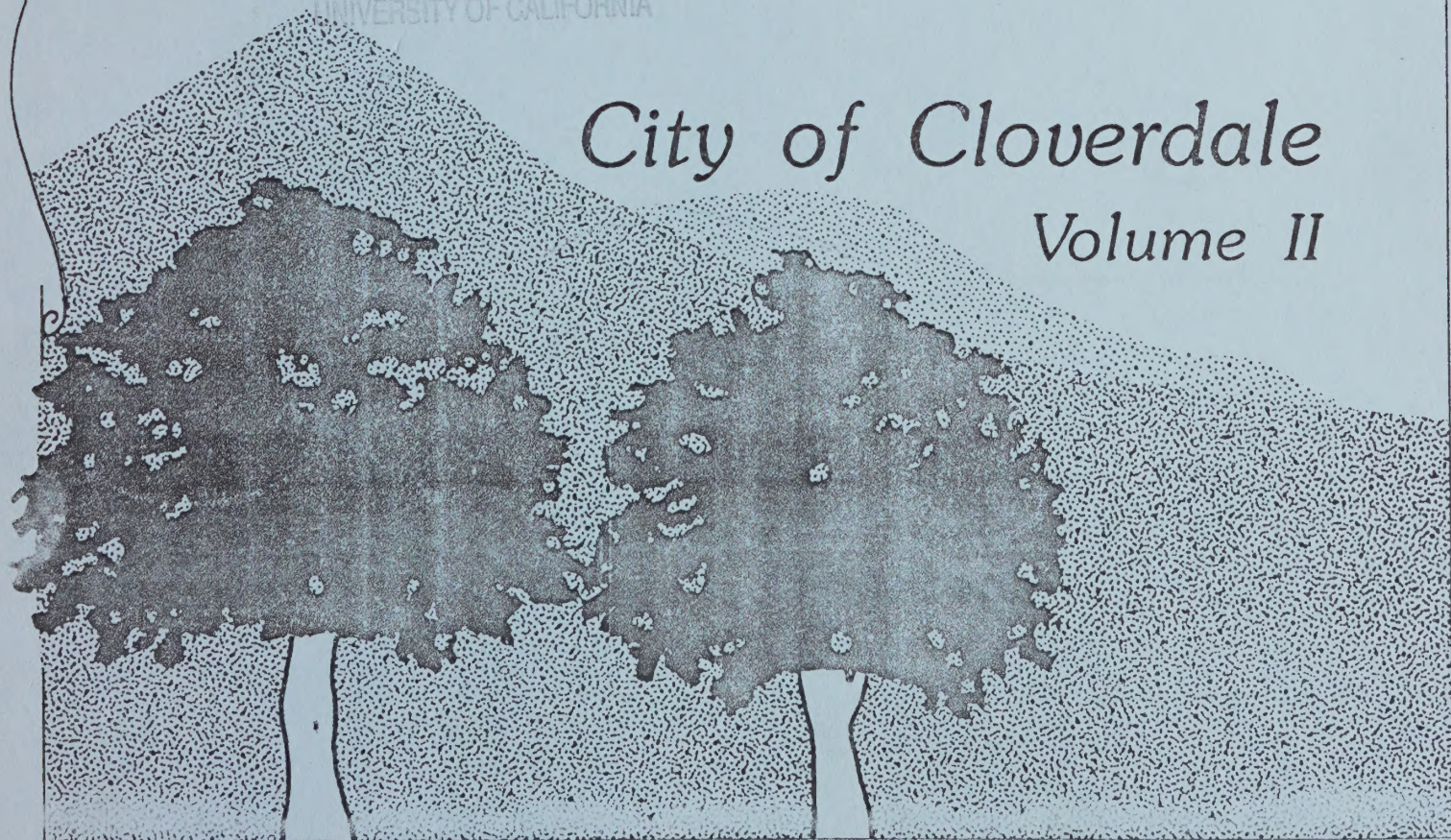
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## *City of Cloverdale*

*Volume II*



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VOLUME II

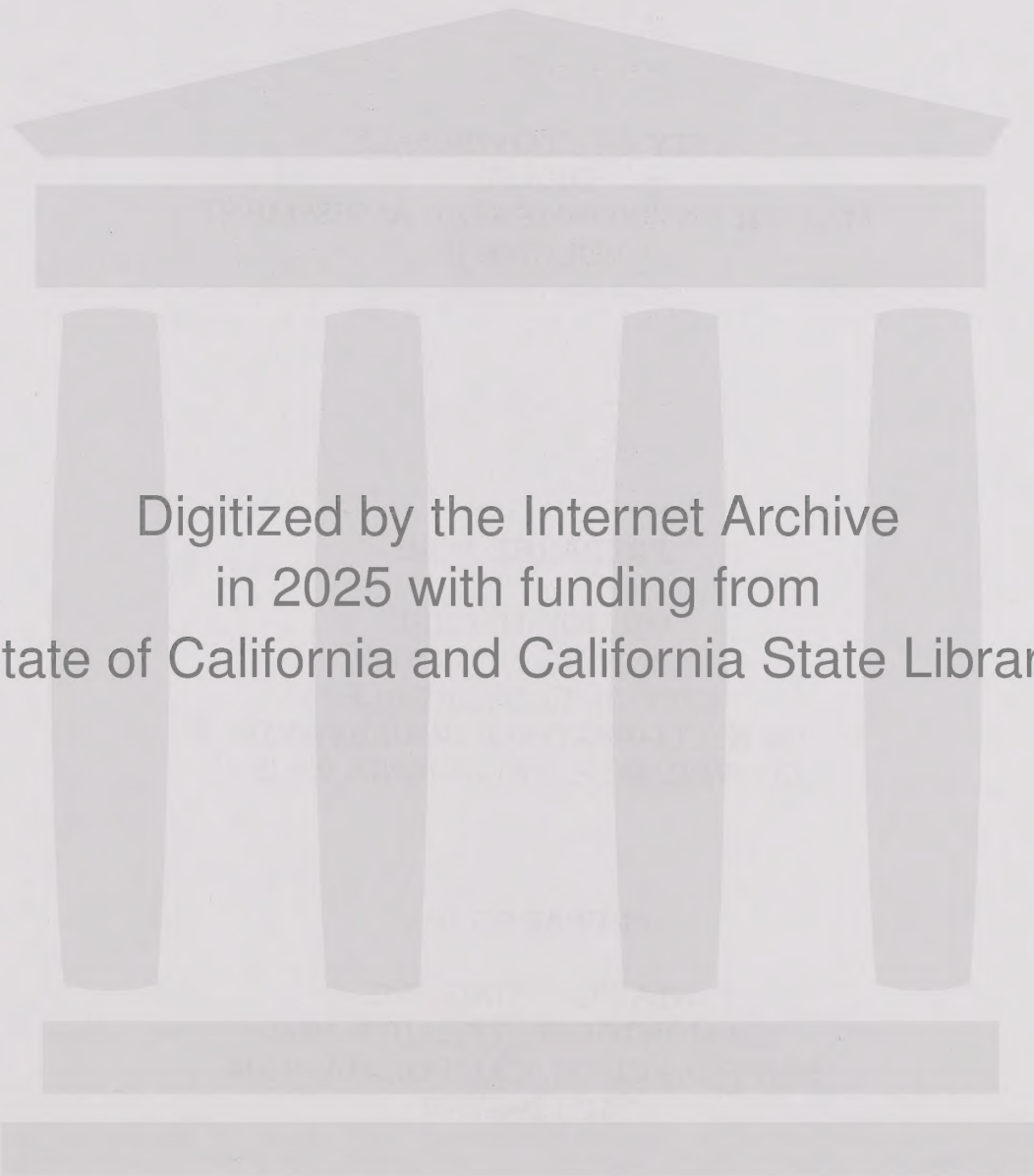
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SEPTEMBER 1990  
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# INTRODUCTION

## DOCUMENT FORMAT

This Master Environmental Assessment (MEA) is an inventory of environmental conditions in the City of Cloverdale and the Study Area. It generally describes existing conditions of resources in the region then focuses on existing conditions in the City and the Study Area both narratively and graphically.

The MEA is organized such that a resource is initially defined and described. Maps of environmental resources and constraints are located in the text of the MEA. Appendix A contains Issues which the City will consider in formulating a land use plan. Appendix B provides an index to each topic as it relates to the State General Plan requirements. City or State standards, policies, and programs related to environmental resources or constraints will be located in the individual elements of the Policy Document. The additional analysis that is required to fulfill CEQA will be provided in the General Plan Environmental Impact Report (EIR).

## PURPOSE

In January of 1978, the Resources Agency of the State of California issued amendments to the "Guidelines of the Implementation of the Environmental Quality Act of 1970." One of the substantive changes in the CEQA Guidelines was to allow local governmental bodies to prepare a Master Environmental Assessment (MEA). An MEA is intended to function as a comprehensive environmental informational base. The base may be used as a reference document and "early warning system" in combination with the individual environmental documents required by CEQA for most public and private developments.

## ENVIRONMENTAL REVIEW PROCESS

After preparation of the MEA and the Revised General Plan Policy Document, an Environmental Impact Report (EIR) will be prepared to fulfill the requirements of CEQA. In 1970, the Legislature of the State of California passed CEQA into law. CEQA requires the environmental consequences of a project be disclosed. An EIR must be prepared for projects which have the potential for significant adverse environmental effects.

In developing the policy basis for the law, the State determined that:

- The maintenance of a quality environment for the people of this state now and in the future is a matter of statewide concern.
- The capacity of the environmental is limited, and the government of the state must take immediate steps to identify all critical thresholds for the health and



safety of the people. Coordinated actions necessary to prevent such thresholds from being reached must also be taken.

- The long-term protection of the environment shall be the guiding criteria in public decisions.
- Every citizen has a responsibility to contribute to the preservation and enhancement of the environment.

The State gave all public agencies the responsibility of adopting objectives, criteria, and procedures for the evaluation of the projects and the preparation of EIRs. A major focal point of this process is the EIR. The EIR is an informational document designed to inform public decisionmakers and the general public of the environmental consequences of proposed projects.

## USES OF THIS DOCUMENT

The MEA and subsequent EIR are intended to streamline the time and cost associated with the environmental review process and to provide a land use planning tool by identifying cumulative, long-range, and area-wide environmental conditions. The intended uses of this document are as follows:

- to provide resource inventory and analysis for the policy plan of the Revised General Plan that partially satisfies the requirements of the General Plan Guidelines;
- to generally identify environmental resources and hazards associated with a parcel of land within the City or its study area such that future projects can strive to accommodate or eliminate environmental constraints at the time of initial project design;
- to provide a source of basic information which permits City staff and the general public to focus the contents of initial studies and environmental impact reports;
- to allow the incorporation of current data and information from the MEA into new environmental reports in order to reduce the volume of new reports;
- and, to provide a data base for utilization in land use planning.



## REVISIONS AND SUPPLEMENTS

The MEA in its present form provides an information base which can be updated with minimal effort. For this reason, it should be periodically updated through efforts of City staff or the environmental review process itself.

## RESIDENTS OPINION SURVEY

In anticipation of revising the General Plan, a survey was conducted by the City in April of 1990. This informal survey was intended to solicit preliminary involvement and response from local residents as to their current feelings about the City. A copy of the survey with a tally of responses is included in Appendix C. Approximately 5,500 survey forms were sent to City residents. One hundred sixty-seven (167) people responded, resulting in a three percent response rate.

Seventy-five percent of those surveyed own their homes, seven percent are renters, and 18 percent did not indicate. The housing types that residents feel are inadequate are low-income, single-family detached, and senior housing. Residents feel there are adequate mobile homes.

Approximately two-thirds survey respondents (64 percent) purchase their basic goods (such as groceries) in Cloverdale. Large expenditure items (such as automobiles, appliances, and furniture) are most frequently purchased in Santa Rosa (37, 59, and 63 percent, respectively). For specialty retail goods (including jewelry and clothing), the largest number of residents shop in Santa Rosa (40 and 51 percent, respectively). For items not purchased in Cloverdale, the main reasons for shopping elsewhere are selection (59 percent) and price (35 percent).

Residents surveyed feel that there is a need for addition/expansion of tourist facilities, especially motels and destination/golf resorts. Forty-three percent of the respondents feel that this land use should be near/adjacent to the proposed Highway 101 Bypass.

Approximately half (53 percent) of the respondents would like to see the City try to attract industrial and research and development type uses. If the community were to grow, respondents would like to see more retail services (86 percent).

Overall, respondents (65 percent) feel that growth would have a positive influence on the City considering additional jobs and revenue and potential change to the nature of the City.

## REGIONAL AND LOCAL SETTING

### INTRODUCTION

Sonoma County is located along the Pacific coastline approximately 40 miles north of San Francisco and the Golden Gate Bridge. The County encompasses just over 1,500 square miles (960,000 acres). Sonoma County is bordered by the Pacific Ocean on the west, Marin County and San Pablo Bay to the south, Solano, Napa, and Lake Counties to the east, and Mendocino County to the north. Because of the geographic configuration and topography of the Northbay area, transportation linkages to adjacent counties are limited to a few routes. U.S. Highway 101 is the major north-south route, connecting the County to San Francisco and Marin to the south and Mendocino to the north.

In Sonoma County, the Santa Rosa Plain lies between the Sonoma Mountains to the east and low coastal hills to the west. The Mayacmas Range forms the eastern boundary of the county. Along with the Sonoma Mountain range, it encloses the Sonoma Valley which extends from near Santa Rosa southeastward to the City of Sonoma and the marshlands of San Pablo Bay. In the north, the Mayacmas Range and Mendocino Highlands enclose the Alexander and Dry Creek Valleys. The County's eight cities, Santa Rosa, Petaluma, Rohnert Part, Healdsburg, Sonoma, Sebastopol, Cotati, and Cloverdale, contained a combined population of just under 200,000 in 1986, approximately 58 percent of the total population of 339,000. (Sonoma County General Plan, 1989.)

The City of Cloverdale is located in the extreme northern end of Sonoma County near the Mayacmas Mountains and Alexander Valley. The City lies in this valley made by the Russian River. The junction of Highways 101 and 128 is located at the northern tip of the City. The City is located approximately 67 miles southeast of Mendocino, 34 miles northwest of Santa Rosa, and 25 miles south of Ukiah. Exhibit 1 provides an illustration of the City's location relative to other cities, highways, geographical features, and Sonoma County boundaries.

### SPHERE OF INFLUENCE

A Sphere of Influence is a defined area established by the City and the Local Agency Formation Commission (LAFCO) which represents the "probable ultimate boundary" of the City. The adoption of a Sphere of Influence is required by State Government Codes 56076, 56301, 56378, and 56425. The Sphere of Influence of the City of Cloverdale is outside of the City boundary, encompassing a larger area.

### STUDY AREA

For planning purposes a logical study area has been formulated for the General Plan Update. This area is larger than the City's Sphere of Influence and does not necessarily





Source: STA Planning, Inc.

# REGIONAL LOCATION

## GENERAL PLAN

City of Cloverdale



no scale





correspond to any boundary formally adopted by the City or County. Although the City does not have direct jurisdiction over the study area, the study area is intended to reflect the community's identity and to designate an area for which the community could give consideration and develop planning policies.

The Study Area for the current General Plan Update was finalized in December 1990 with the addition of three small properties. The revised study area map is indicated on Exhibit 24 in the Revised Study Area Map and Analysis Section of this MEA. Exhibit 4 in the Land Use section also indicates the revised study area boundaries.

The existing City of Cloverdale General Plan boundary is within the Cloverdale Study Area. The Study Area generally encompasses the City of Cloverdale, its Sphere of Influence, and other land to the west, north, south, and east.

In total, the Cloverdale Study Area encompasses approximately 7.3 square miles (4,674 acres). Exhibit 2 indicates the boundaries of the MEA Study Area. Exhibit 3 depicts the USGS map for the Study Area.

## LOCAL PLANNING EFFORTS

The Cloverdale General Plan was adopted in May, 1978. The most current element of the General Plan is the Housing Element (June 1985) which requires updates every five years. Although this General Plan has been able to meet the community's needs for several years and includes the required elements, it is now in need of updating. A General Plan Update is currently under preparation. This MEA is the first step of the General Plan process outlined by the City of Cloverdale Planning Department.

## SONOMA COUNTY PLANNING EFFORTS

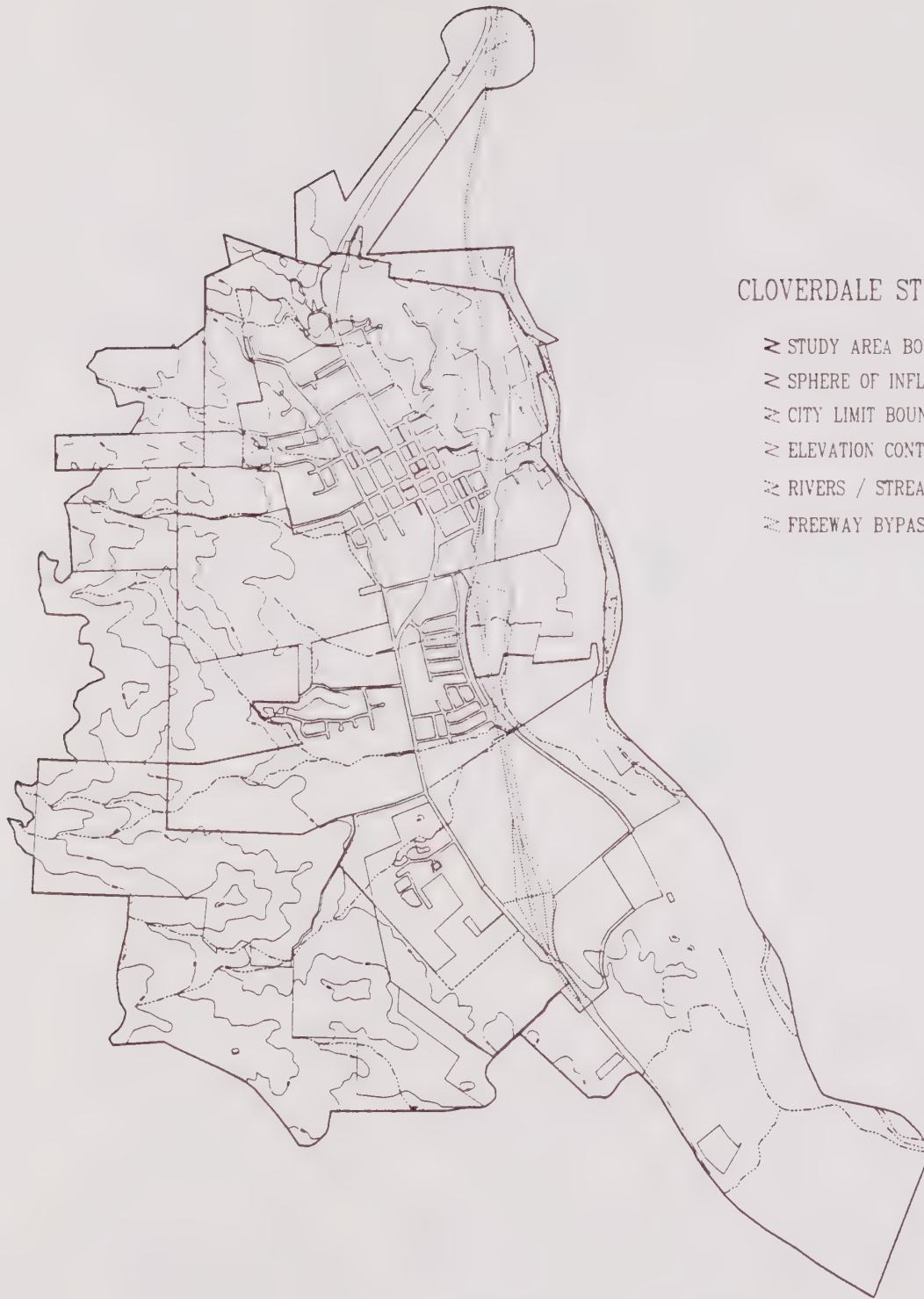
### Sonoma County General Plan

The Sonoma County General Plan was adopted by the Board of Supervisors in March, 1989. The Sonoma County General Plan summarizes County planning goals and objectives and establishes a balance between diverse and conflicting programs. It helps maintain the compatibility of economic and environmental objectives and provides guidance for the allocation of resources.

The Sonoma County General Plan includes the following required elements: Land Use, Housing, Circulation, Conservation, Open Space, Noise, and Safety. The general plan includes three optional elements: Agricultural Resources, Air Transportation, and Public Facilities and Services. Goals and policies that affect the City of Cloverdale are provided below. The majority of these goals and policies are related to the concept of development occurring within city boundaries.







## CLOVERDALE STUDY AREA

- STUDY AREA BOUNDARY
- - - SPHERE OF INFLUENCE BOUNDARY
- ... CITY LIMIT BOUNDARY
- ELEVATION CONTOUR
- RIVERS / STREAMS
- FREEWAY BYPASS

PLEASE REFER TO EXHIBIT 24 FOR REVISED STUDY AREA.

Source: STA Planning, Inc.

# MEA STUDY AREA

## GENERAL PLAN

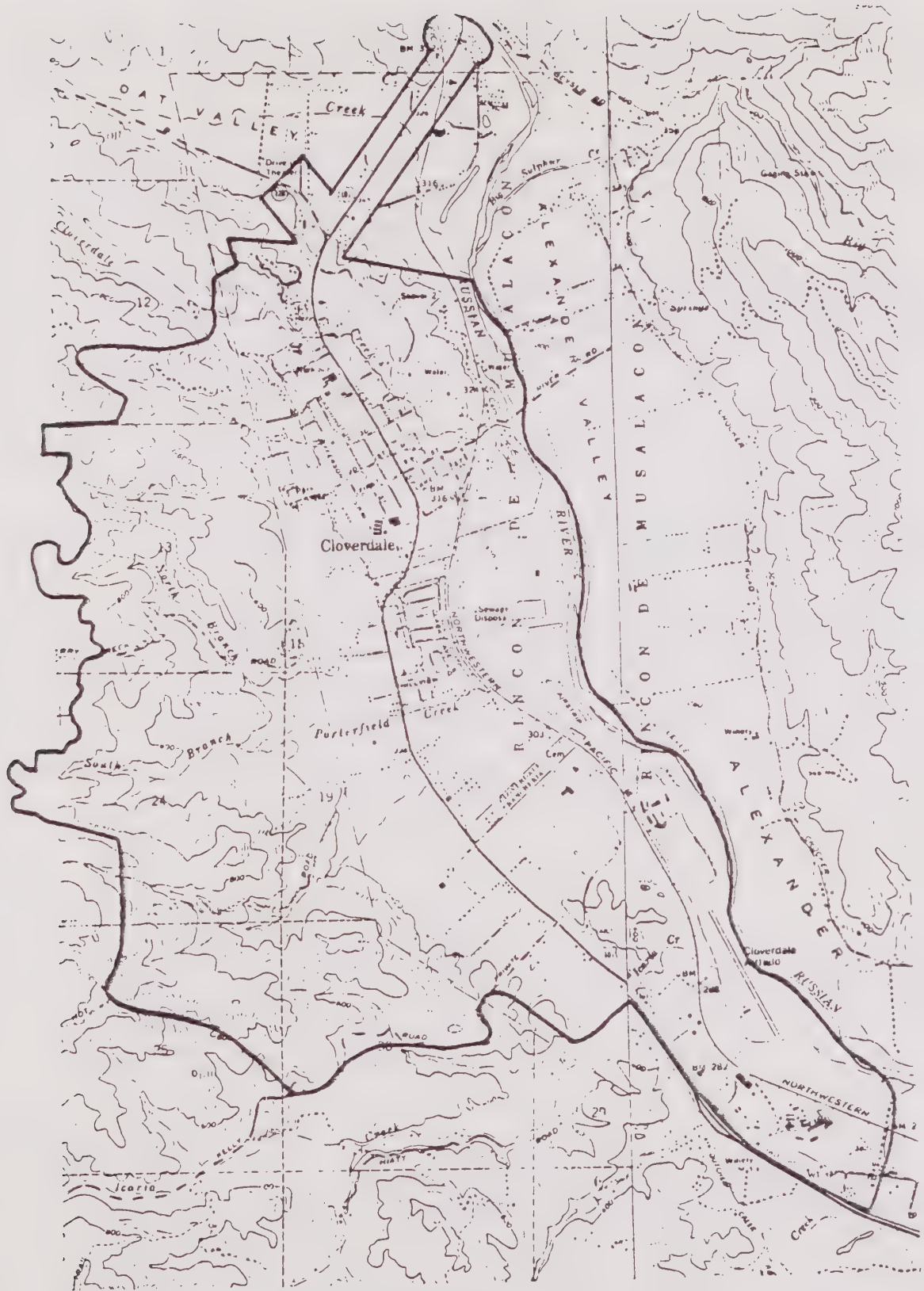
### City of Cloverdale

2









Source: USGS Quad

# USGS MAP

## GENERAL PLAN

### City of Cloverdale







## Land Use

- Goal 3: Locate future growth within the cities and unincorporated urban service areas in a compact manner using vacant "infill" parcels and lands next to existing development at the edge of these areas.
- Goal 4: Maintain adequate public services in both rural and urban service areas to accommodate projected growth. Authorize additional development only when it is clear that a funding plan or mechanism is in place to provide needed services in a timely manner.
- Objective 11.1: Retain agricultural lands in Dry Creek, Alexander, Oat and Knights Valleys in agricultural production.
- Objective 11.2: Accommodate new commercial uses primarily in Cloverdale and secondarily within Geyserville's urban service boundary.
- Objective 11.3: Retain large parcel sizes within Cloverdale's urban expansion boundary to provide for efficient urban residential development. New industrial or urban residential uses within the expansion area may occur only after the full range of public services are available.
- Policy 11h: Avoid extension of the urban expansion boundary for Cloverdale east of the Russian River or west of Highway 101 into the Oat Valley.

## Housing

- Goal 13: It is the goal of the County of Sonoma to assure that housing opportunities are provided in a variety of urban and rural settings --- with rural residential development limited to areas where there are no conflicts with maintenance of public health and safety or with conservation of agricultural, environmental, open space, or other natural resources.

## Open Space

- Goal 3: Identify and preserve roadside landscapes which have a high visual quality as they contribute to the living environment of local residents and to the county's tourism economy.
- Policy 3g: Avoid freeway oriented billboards along designated scenic corridors.
- Policy 7d: ...Russian River Waterway Trail. The Russian River is a navigable waterway from Cloverdale to the coast and as such, public access is protected by Article XV, Section 2 of the California Constitution. This proposed waterway trail

extends from the coast to Preston Bridge immediately north of Cloverdale.

### Circulation

- Policy 6a: Use Figure CT-6b on page 393 [of the Sonoma General Plan] as the improvement plan for [the Cloverdale area] arterials and collectors. All other roadways are local roads.
- Policy 6b: Additional transit service may be provided by increasing the frequency of buses on the existing route or by express commute service when justified by ridership levels and transit demand.
- Policy 6c: Utilize Kelly Road to bypass the steep and winding segments of Hot Springs Road.

### Air Transportation

- Goal 1: It is the goal of the County of Sonoma to assure that land use types and densities in areas adjacent to public use airports are compatible with airport activity so existing and future capabilities of the airports can be preserved.
- Objective 1.3: The maximum noise exposure which shall be considered normally acceptable for development of new residential uses in areas surrounding a public-use airport is the 60 dB CNEL noise contour...

### Public Facilities and Services

- Goal 2: Assure that park and recreation, public education, fire suppression and emergency medical, solid waste services, and public utility sites are available to meet the future needs of Sonoma County residents.

## REGIONAL PLANNING EFFORTS

In January 1989, the Association of Bay Area Governments (ABAG) published their Housing Needs Determination study. This study indicates that in 1988 there was a total of 151,410 dwelling units in Sonoma County, of which approximately 2,000 are located in the City of Cloverdale. The study further relates that the City of Cloverdale's total projected housing need is 783 additional dwelling units by 1995.



# LAND USE

## INTRODUCTION

The purpose of this section is to analyze the existing land use setting in the City of Cloverdale. This section includes a brief discussion of the current land use plans and policies and a discussion of land utilization within the General Plan Study Area.

## EXISTING LAND USE PLANS

The current Land Use Plan was adopted in May 1978 as part of the Cloverdale General Plan. Residential categories include: Hillside Residential, Low Density Residential (1 to 2 units per gross acre), Single Family (4 to 6 units per gross acre), Medium Density Residential (6 to 15 units per gross acre), High Density Residential (16+ units per gross acre), and Planning Reserve (4 to 6.5 units per gross acre). Non-Residential categories include: General Commercial, Limited Commercial, Thoroughfare Commercial, Service Commercial, Professional Office, Mixed Development, General Industry, Public, Quasi-Public, and Institutional. The 1978 General Plan was intended to be a community policy statement regarding the use or management of its physical resources. The current General Plan ensures that development is sensitive to the small town character of the City while allowing for planned growth.

The current City Zoning Ordinance was adopted in 1980 and updated in January 1990. Zoning designations include: Estate Residential, Single Family Residential, Two-Family Residential, Multiple Family Residential, Office and Multi-Family Residential, General Commercial, Limited Commercial, Thoroughfare Commercial, Service Commercial, General Industry District, Planned Community District, Planned Unit Development Combining District, Primary Flood Plain District, and Secondary Flood Plain District.

## EXISTING LAND USE

The City of Cloverdale encompasses approximately 1,329 acres. The existing Sphere of Influence for the City encompasses approximately 2,347 acres. Exhibit 4 contains a graphic depicting existing plus approved land use on the latest Study Area base. Approved projects have been numbered and indicated on the graphic. The City is primarily a residential community but a variety of land uses are present. Approximately one-third of the land within the City limits is vacant, another one-third is residential, and the remaining one-third is divided among commercial, agricultural, community facilities, and industrial uses.

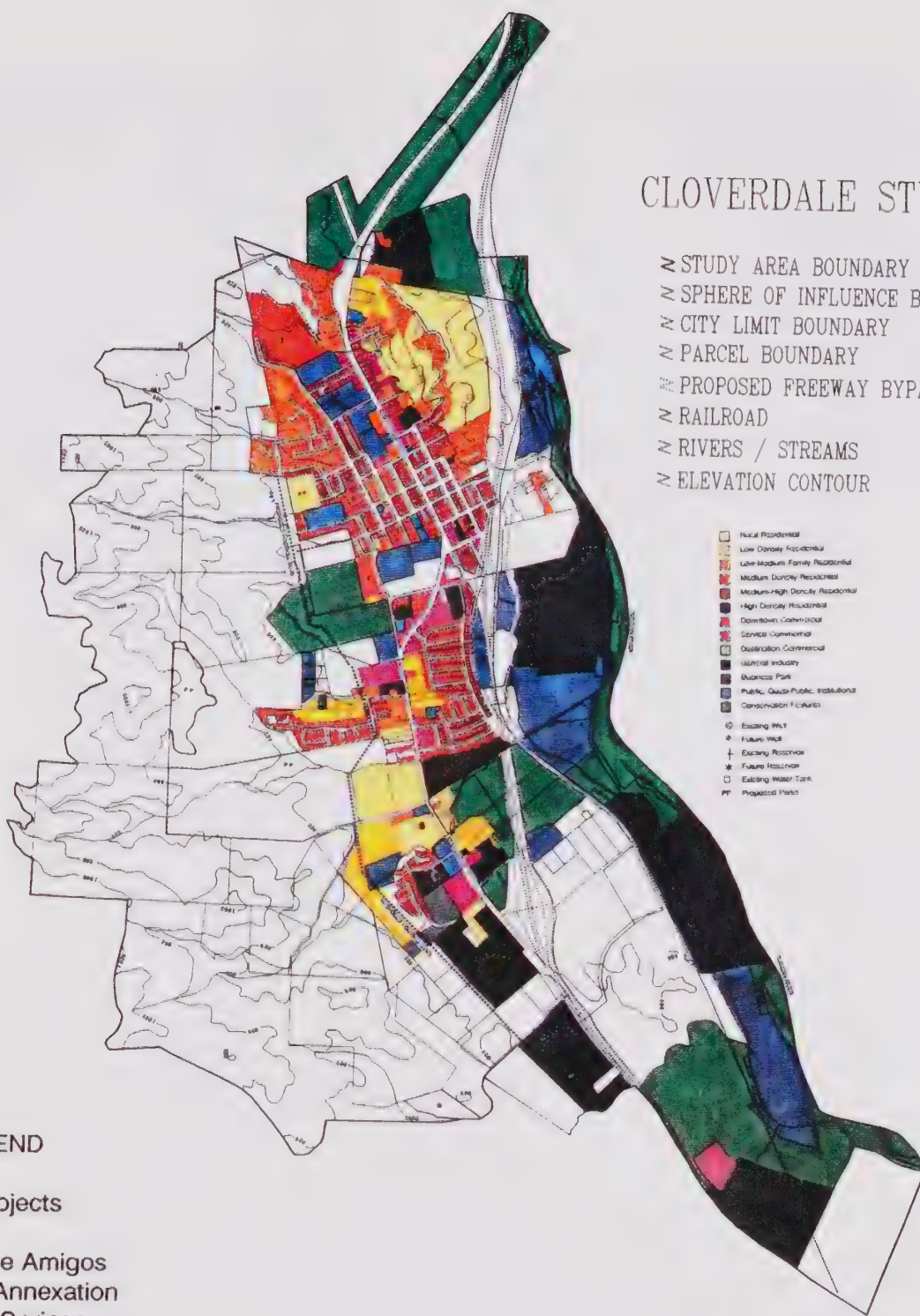
The study area encompasses approximately 4,674 acres or 7.3 square miles. Exhibit 5 provides an aerial photograph of the entire study area. The predominant existing land uses within the study area are vacant and single family residential uses.





## CLOVERDALE STUDY AREA

- ≡ STUDY AREA BOUNDARY
- ≡ SPHERE OF INFLUENCE BOUNDARY
- ≡ CITY LIMIT BOUNDARY
- ≡ PARCEL BOUNDARY
- ≡ PROPOSED FREEWAY BYPASS
- ≡ RAILROAD
- ≡ RIVERS / STREAMS
- ≡ ELEVATION CONTOUR



### LEGEND

#### Approved Projects

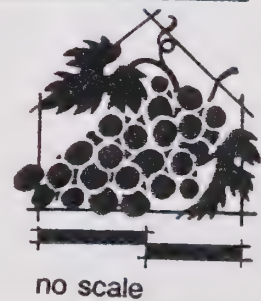
1. Rancho de Amigos
2. Furber II Annexation
3. Jefferson Springs
4. Seghesio
5. Cloverdale Garden Apartments
6. Westview Subdivision

Source: STA Planning, Inc.

## EXISTING LAND USE

## GENERAL PLAN

## City of Cloverdale









Source: City of Cloverdale

AERIAL PHOTO

GENERAL PLAN

City of Cloverdale

5A



no scale







Source: City of Cloverdale

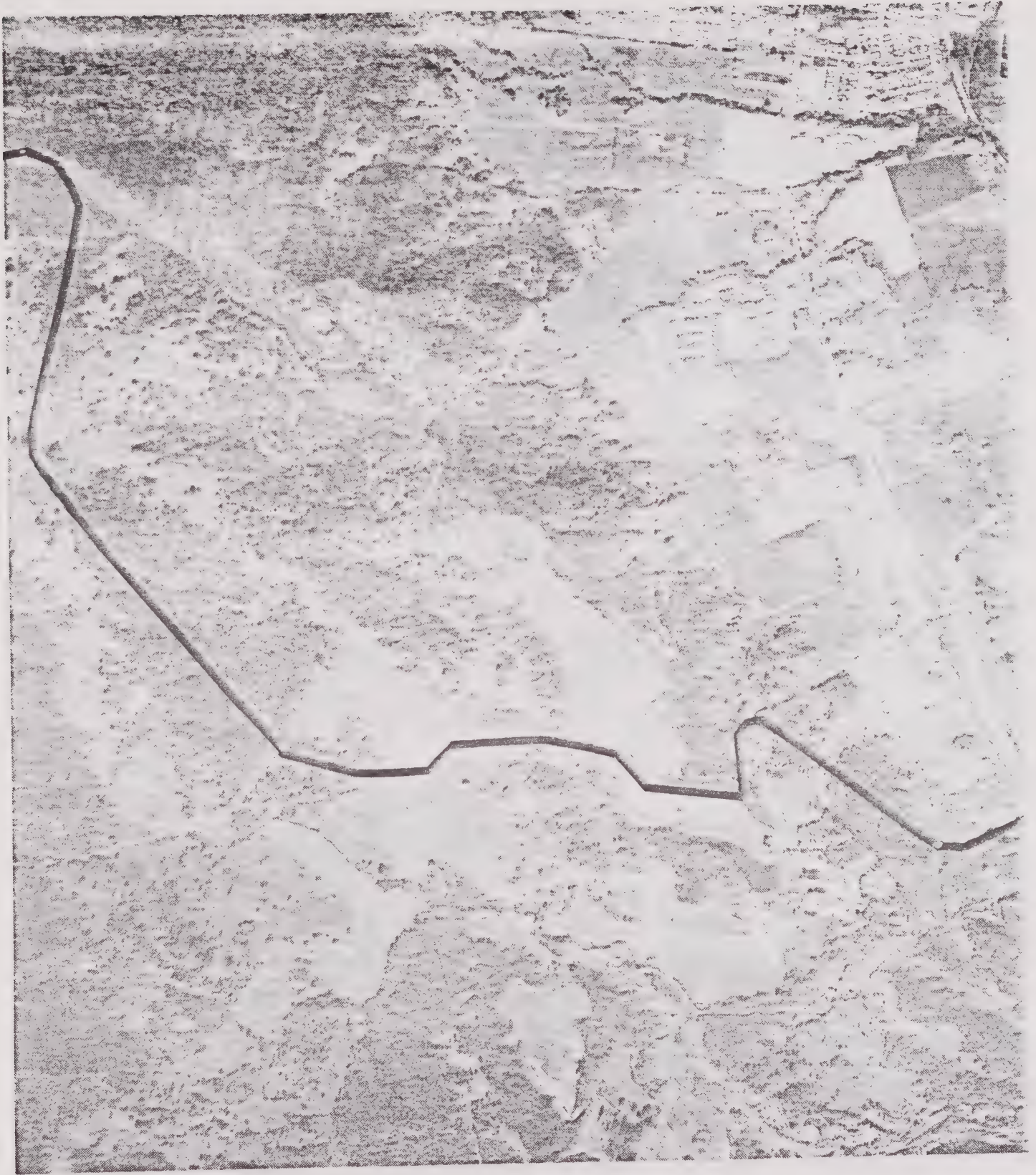
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GENERAL PLAN  
City of Cloverdale

5 B









Source: City of Cloverdale

AERIAL PHOTO  
GENERAL PLAN  
City of Cloverdale

5C









Source: City of Cloverdale

AERIAL PHOTO  
GENERAL PLAN  
City of Cloverdale

5 D







## PROPOSED LAND USE

The proposed land use plan for the City of Cloverdale is depicted on the General Plan Land Use Map provided in the Policy Document, Volume I of the General Plan Update. The Land Use Map indicates the proposed general distribution and location of the following uses: housing, business industry, open space, agriculture, natural resources, recreation, enjoyment of scenic beauty, education, public buildings and ground, solid and liquid waste disposal, and other uses.

## FINDINGS

1. The small amount of General Plan Amendments to the 1978 General Plan reflects the City's support of the existing General Plan.
2. Approximately one-third of the existing land in the City of Cloverdale is used for single-family residential uses.
3. There are approximately 1,575 vacant acres in the study area.





# ECONOMICS

## FISCAL

The Fiscal Analysis gives projections for City revenue and expenditures. The budget figures are estimated on a per capita and per unit basis. This method of calculation allows the model to be used in considering future fiscal projections based on the development options selected. The prototypical development programs give a summary of the net effect of various development types on the City's fiscal outlook.

### City Budget Review

As a first step, a detailed review of the City's 1990-91 budget was conducted. City revenues and expenditures have been summarized in Appendix D, Tables B1 and B2. These amounts have been calculated on a per-capita basis. For expenditures, preliminary judgments have been made determining whether it is a direct or administrative cost. Per-capita calculations are based upon an estimated City population in January 1990 of 4,856 residents, per the State Department of Finance.

Most of the revenue and expenditure projections used in this analysis are not keyed directly to per-capita figures derived from the budget. Only nine revenue items and three expenditure items of 22 total items projected are of a per-capita nature. Specific budget per-capita figures utilized in detailed projections are identified in Appendix D, Tables B1 and B2.

### On-Going Revenue Factors

#### Property Taxes

Secured property taxes are based upon a 35.1 percent City share of the \$1.00 per \$100 assessed valuation (AV) property tax rate, as determined from review of Auditor-Controller tax rate allocations documented in Appendix D, Table C1. It also compares closely to property tax relationships evidenced by the City's 1990-91 budget, as follows:

#### Assessed Value

Secured	\$146,784,101
Unsecured	<u>5,975,780</u>
TOTAL	\$152,759,881

Total Property Tax @\$1.00 per \$100 AV	\$ 1,527,599
--	--------------



City Property Taxes  
per 1990-91 Budget

\$ 495,000

Percent Share

32.4%

The 35.1 percent factor is an average for sites within the City. Sites within unincorporated Sonoma County to be annexed will be subject to the standard County-City annexation agreement within Sonoma County. This calls for a property tax equal to approximately 75 percent of current City levels. In the case of annexation, the City will also receive 100 percent of tax rate allocations for functions to be assumed by the City, particularly fire protection. Please refer to Appendix D, Table C1 for a listing of existing tax rate shares within Cloverdale's six tax rate areas (TRA's). The 35.1 percent factor excludes consideration of redevelopment property tax increments. For specific development sites within the City's redevelopment project area, higher tax rate shares will be obtained.

Unsecured property taxes are estimated at 10 percent of secured property taxes, applicable only to commercial and industrial properties. This factor is based upon Southern California averages. No consideration is given to minor personal property taxes attributable to residential usage.

### Sales and Use Taxes

Sales taxes are estimated at 1.09 percent of taxable sales. This rate includes the statutory 1.00 percent specified allocation of sales taxes to cities, and an additional 0.09 percent, an estimate of additional taxes prorated to cities as their share of "unallocated" taxes, as reported in the State Board of Equalization (SBOE) reports. The basis of this 0.09 percent estimate is detailed in Appendix D, Table D1.

### Franchise Fees

Annual franchise fees are estimated at \$20.00 per residential unit and 1.25 cents per square foot of commercial/industrial building space. The commercial/industrial factor is based on the assumption that a commercial/industrial facility of 1,600 square feet of building space is the equivalent to a residential unit. The resultant factor is 1.25 cents per square foot of building space (\$20.00 divided by 1,600 square feet). The residential factor is a total of the following three fees.

#### CABLE TV

A three percent tax rate applied to an average monthly bill of \$14 per residential unit equates to annual tax of \$5.04 per residential unit.



## REFUSE

A seven percent tax rate applied to an average monthly bill of \$11 per residential unit equates to \$9.24 per residential unit annual tax.

## PG&E

A seven percent tax rate applied to an average monthly bill of \$18.67 results in an average annual tax of \$15.72 per residential unit.

## Transient Lodging Tax

This tax is computed at the City's present tax rate of 7.00 percent applicable to room tax revenues. This tax rate is within the six to 10 percent range found among cities elsewhere in the State.

## Business License

A factor of five cents per square foot of commercial/industrial building space has been used. This factor was determined after review of the City's business license structure, which keys business license fees to a flat-rate schedule. The five cent estimate is based upon two average tenant types, retail and office.

## RETAIL

For example, a building space of 2,000 square feet, employment of eight, business license fee of \$112.50, will result in a tax of 5.63 cents per square feet of building space.

## OFFICE

For example, a building space of 1,000 square feet will result in a tax rate of 5.62 cents per square foot of building space.

## Property Transfer Tax - Resale

Property transfer taxes are estimated at 7.9 cents per \$1,000 development valuation to reflect ongoing resale of residential units. The 7.9 cent factor is based upon 55 cents per \$1,000 valuation at time of transaction under the assumption that average resale occurs every seven years. In detailed calculations, this factor has been applied only to single-family sales units. It assumes that multiple-family rental apartments and commercial facilities will not be subject to on-going resale.

## Per-Capita Items

The following City revenues are estimated on a per-capita basis, derived from the City's 1989-90 budget, as follows:

	<u>Per Capita</u>
Motor Vehicle In-Lieu	35.32
MTC Article 8 Tax - Street	22.24
State Gas Tax	14.03
MTC Article 4 Tax - Transit	8.71
Vehicle/Criminal Code Fines	3.70
Cigarette Tax	1.88
Recreation Use Fee	1.79
Animal Licenses/Fees	0.64

The above factors are based upon 100 percent of current budget levels, with the exception of Vehicle/Criminal Code Fines and MTC Article 8 taxes, which are estimated at 50 percent of current budget levels. See Appendix D, Table B1 for detailed estimates.

## Ongoing Expenditure Factors

### Fire Protection

Annual fire protection costs are estimated at \$100 per residential unit and 6.25 cents per square foot of commercial/industrial building space. Existing budget cost levels in the City are estimated at \$86.65 per residential unit as shown in Table A.

The City Fire Department serves a total area of 155 square miles and a population estimated by the Fire Chief at 8,000 to 10,000, roughly double the City's population. This service is provided by a combination of full-time and volunteer fire fighters. As the City grows, it is likely that the Fire Department will require additional full-time personnel. Also, it is possible that the City will require either a second station or a relocated single station. The specifics of future fire service can be a consideration in General Plan update decisions.

The addition of a relatively small number of residential units will not create incremental cost increases to the City Fire Department. To provide a measure of the impact of future residential and commercial/industrial growth on fire protection requirements, estimates prepared by the Fire Chief covering maximum City requirements to serve the General Plan study area and provide additional County service as currently contracted. The estimate of full-time employment and resultant payroll costs are shown in Table B.

TABLE A  
FIRE PROTECTION EXPENDITURES

	COST AMOUNT	NUMBER OF UNITS	COST PER UNIT
Total Budget	\$321,663		
Less Fee Recovery for Out-of-City Service	138,915		
Net City Cost	182,748	2,109	\$86.65
Source:	City of Cloverdale		



**TABLE B**  
**FIRE DEPARTMENT PAYROLL COSTS**

	NUMBER OF EMPLOYEES	ANNUAL PAYROLL COST PER EMPL	ANNUAL COST
Chief	1.0	\$45,000	\$45,000
Assistant Chief	1.0	\$35,000	\$35,000
Captain	3.0	\$33,000	\$99,000
Engineering	3.0	\$28,000	\$84,000
Fire Fighter	6.0	\$26,000	\$156,000
Fire Prevention Officer	1.0	\$33,000	\$33,000
Security	1.0	\$15,000	\$15,000
Mechanic	0.5	\$20,000	\$10,000
TOTAL	16.5		\$477,000

Source: City of Cloverdale

Based on current budget relationships, total operating costs at this operating level would be approximately \$692,000, or payroll plus 45 percent overhead.

This level of operations should be able to serve 6,000 to 7,000 residential units, either from a single station or from two stations, with resultant costs in the range of \$99 to \$115 per residential unit. For purposes of this analysis, costs resulting from growth are the aforementioned \$100 per residential unit and 6.25 cents per square foot of commercial/industrial building space. These are preliminary figures, subject to additional testing against a General Plan formulation in subsequent analysis.

### Police Protection

Annual police protection costs are estimated at \$100 per capita, and 16.9 cents per square foot of commercial/industrial building space. Current budget levels are at \$134.54 per capita, as indicated by Appendix D, Table B2.

Based on discussions with the Police Chief, it would appear that current levels are significantly influenced by outside activity. For example, approximately 60 percent of arrests are of non-residents.

To gain a measure of the impact of new development on the community, an estimate was obtained from the Chief of current requirements for a population at or near 5,000 versus those for Cloverdale at a population of 10,000. For this additional increment of approximately 5,000 population, his estimate of additional personnel would be one Lieutenant, seven officers, and one investigator. The cost for the additional personnel would be approximately \$348,900.

This cost equates to approximately \$70 per capita. In the interest of conservatism, the analysis utilized a mid-range figure of \$100 per capita, a figure which is similar to police costs in many cities throughout the State.

The commercial/industrial factor of 16.9 cents per square foot of building space is based upon an equivalent dwelling unit (EDU) approach. It is assumed that each 1,600 square feet of commercial/industrial building space is the equivalent of a single-family residential unit with average unit occupancy of 2.7 residents. The resultant calculation is a cost of \$270 per unit (\$100 per capita multiplied by 2.7 population) divided by 1,600 square feet.

### Animal Control

Annual animal control costs are estimated at \$3.42 per capita, per the City's 1990-91 budget as documented in Appendix D, Table B2.

## Street Maintenance

Annual street maintenance costs are estimated at \$4,000 per lane-mile. This factor is based primarily on regional experience. The City's existing level of street maintenance costs is somewhat higher, as evidenced by the following calculation:

Budget Costs	\$148,374
Number of Street Miles	15.1
Number of Lane Miles	30.2
Cost Per Lane Mile	\$4,913

The above budget costs are drawn from Appendix D, Table D2, including an allocation of a portion of the Public Works Administration function to street maintenance.

Discussions with Fred Browne (Public Works Director) indicated that current maintenance costs in the City are high because of the existing substandard conditions of City streets. He estimates that two-thirds of existing City streets are substandard. As a consequence, a lower street maintenance figure has been used for streets to serve new development, streets which will be of a much higher standard than most streets elsewhere in the City.

## Park Maintenance

Park maintenance is estimated at \$7,000 per finished park acre. This estimate is also based largely on regional experience. The City's current costs are at a higher per-acre level, per the following computation:

Budget Costs	
97% of Community Facilities	\$97,036
Park Acres	6.5
Cost per Acre	\$14,929

As new park facilities are constructed in the City, their maintenance should be more in line with regional experience than with current City experience. Park maintenance cost estimates assume that the City will develop 2.5 acres of finished parkland for each 1,000 population - a highly preliminary assumption at this point in the planning process.

## Recreation Services

This function is primarily concerned with operating the City's swimming pool. Costs of this function are estimated at \$3.32 per capita, based upon the City's current budget, documented in Appendix D, Table B2.



## **Transit Operations**

Transit operations costs are estimated at \$8.71 per capita, also based on the City's current budget. Our analysis assumes that these costs are direct offsets to MTC Article 4 tax funding obtained from the State.

## **Administration**

Administration costs are estimated at 13.0 percent of other (direct) costs. These administration costs are essentially the City's "overhead" expenses. As indicated in Appendix D, Table B2, it is estimated that the City's current administrative costs are equal to 12.77 percent of other costs. For a city such as Cloverdale, it is appropriate to assume conservatively that administrative costs will continue to grow directly in proportion to other costs at this current budget level. This percentage factor is in line with similar cost factors for many other cities in the State. This factor, as all others in the analysis, can be readily modified to reflect changes in assumptions that may be desired by the City.

## **One-Time Revenues and Expenditures**

### **Development Control**

For purposes of this fiscal impact analysis, a development control function has been defined to encompass those activities which are directly related to processing new development in the City. Included are various processing functions within the City's Planning, Engineering, and Building Departments. Consistent with commonly accepted fiscal impact analysis methodology, this analysis assumes that the development control functions are breakeven situations; that fees collected will support related direct costs. The City Council is not restricted in establishing fees to this end. This breakeven approach is appropriately conservative. Please refer to Appendix D, Tables B1 and B2, for budget details. For purposes of gaining perspective as to fee and cost amounts, a California prototypical factor of 0.5 percent of new development value has been used.

### **Property Transfer Tax-New**

Property transfer taxes collected by the City at time of initial sale of residential units are estimated at 55 cents per \$1,000 of new development value. This is the City's 50 percent share of such taxes. This analysis assumes that multi-family rental units and commercial properties will not be sold, and thus no taxes are assumed for these properties. This revenue item has no direct expenditure offset.

## **Park Facilities**

This analysis assumes that park facility costs will be equal to the City's current mitigation fee of \$900 per residential unit. On a very rough basis, it is estimated that this fee will permit development of approximately 0.75 acre finished park for each 100 residential units.

Under an average residential unit occupancy of 2.7 people, the fee would thus cover park development of approximately 2.78 acres per 1,000 population.

This amount of supportable park acreage is approximately one-half of the 5.0-acre standard currently being considered in the General Plan update process. If the City is to achieve its park standard, either fees (or developer construction contributions) must be increased or standards must be lowered.

## **Thoroughfare Facilities**

This analysis assumes that additional thoroughfare costs resulting from new development will be direct offsets to the mitigation fee of \$150 per residential unit. In reality, most new street improvements will be paid as part of the developer-planned conditioning process.

## **Other Capital Facilities**

No consideration is given in this phase of the analysis to mitigation fees to cover additional capital costs which may be incurred by the City over time as its General Plan is implemented. Thus costs might be required to cover:

- A significant rebuilding of the City's existing circulation structure;
- Costs of a second fire station or an expanded or relocated station; or
- Costs of additional public buildings to house the administrative function.

These are matters which cannot be addressed on a prototypical basis, nor can they be easily related to per capita or per unit growth. They are matters which should be considered to some degree in the ongoing planning process.

## **Excluded Budget Items**

Fiscal projections contained herein specifically exclude the following items contained within the City's budget:

- Earnings on existing investments, including interest, rents, and concessions;
- The City's sewer/water enterprise operation;

- The City's airport operations; and
- Any prospective assessment district revenues and costs incorporated into the City's budget.

Exclusion of these items is consistent with fiscal impact analysis methodology utilized throughout California.

### Prototypical One-Acre Development Programs

Twelve prototypical development programs have been formulated. Key factors for each development program are identified in Appendix D, Table 2. Each of these prototypical uses has been considered as an individual development program, with City revenues and expenditures to serve such development projected for each alternative. Principal conclusions to be drawn from these projections include the following:

- By far the greatest cash generators to city are hotels and auto dealers, contributing almost \$50 thousand or more per acre annually.
- Restaurant and retail facilities also generate substantial cash flows, in the mid to high \$20 thousand per acre range annually.
- Except for multi-family and rural residential housing which has a small negative cash flow, residential cash flows are also positive, but well below commercial cash flows.

For purposes of this preliminary analysis, we have assumed that the City will realize an overall average of 2.5 acres of park per 1,000 population, computed at 50 percent of the aforementioned possible goal. This factor can be easily modified in subsequent planning, as prototypical factors utilized are preliminary and subject to refinement during the subsequent planning process. Also, this analysis can be modified to incorporate additional uses should this be appropriate.

## MARKET

Principal issues are the potential for commercial and industrial development in Cloverdale. This analysis will not duplicate work directed specifically at the City's Downtown Redevelopment Plan.

### Freeway Commercial Development

Based on the market analysis, the City's number one planning priority should be directed towards the establishment of a 20 to 30-acre freeway commercial area at the prospective Highway 101 freeway central interchange. Similar development should be discouraged at



the north and south interchanges. Initial attention should be directed toward sites on the west side of the freeway to provide linkage with Cloverdale Boulevard and the downtown area.

Specific uses to encourage include service station, restaurant and fast food, mini-market, and hotel/motel facilities. These are high tax producers from the City's fiscal standpoint. Further, it is estimated that they will be highly compatible with the upgrading of the downtown. They will provide additional visitors to the nearby area. They will not be directly competitive with facilities of the type contemplated for downtown.

It is estimated that market potentials are available to support the 20 to 30-acre complex. Current average daily traffic on Highway 101 at Cloverdale exceeds that found at Coalinga along Interstate 5 in the San Joaquin Valley where such facilities are found at several major locations. There is no evidence of similar development between Cloverdale and Santa Rosa.

### Industrial Development

The City's number two priority should be to encourage industrial development. It is a realistic absorption target to have five acres of new development per year. Possibly a high-end target would be ten acres per year. The five acre target would lead to annual development of approximately 75,000 square feet of building space to be occupied by 100 to 125 industrial workers.

The industrial development market is available from the four-County region (Sonoma, Mendocino, Lake, and Napa) where it is estimated that industrial development has averaged 80 to 100 acres per year. One-half to two-thirds of this development has been in Sonoma County. Cloverdale's attainment of industrial development will require availability of sites and adequate promotions, matters which will require further detailed planning.

### Downtown Redevelopment

It is recommended that the City continue to encourage downtown development as contemplated in the recently prepared Draft Downtown Redevelopment Plan. The downtown's principal role would be to provide local-serving commercial facilities including retail and office. A second possibility would be to create a visitor center, designed to attract the many thousands of visitors who come to the north county area each year, particularly in connection with visitation of the wine industry. The success of a specialty visitor center is difficult to predict, but attempts to create a center should be encouraged. Such a center would be compatible with potential commercial/industrial development elsewhere in the City and with downtown objectives.

## Residential Development

Continued residential development is encouraged to provide the community with greater economic stability. The projected long-term average residential development is as follows:

- 100 units annually within a 2.5 mile market area ring around Cloverdale from the center of town
- 125 units annually within a 5.0 mile ring
- 150 units annually within a 10.0 mile ring

It would be realistic to anticipate that 25 to 35 percent of these units will be of a multiple-family type, either rental or condo sales type.

## Fiscal and Planning Considerations

In the fiscal analysis of this section, residential development is shown to pay its way, but the highest cash generators to the City are commercial facilities, particularly hotel/motel and retail. The City does not require additional residential development for fiscal health. The City can then be highly selective in approving types of residential development that meet planning objectives. The City needs to take a more flexible stance in encouraging and controlling commercial and industrial development. While aesthetic controls are needed, they must be realistic in relation to the marketplace.

## Land Area and Developable Sites

Total land area within the study area is estimated to be 4,674 acres. Approximately 1,575 acres of land within the Study Area alone is vacant and developable. It is clear that the study area contains a large amount of vacant property and ample for new development of all types for many years to come.

## Regional Economic Growth

For purposes of this analysis, attention has been concentrated on Sonoma, Mendocino, Lake, and Napa Counties. Estimates reflect the following annual growth measures for the period from 1990 through 2010:

- 6,600 occupied housing units per year
- An average housing occupancy of 2.60 population per unit
- A resultant annual population increase of 17,160

Detailed estimates are contained in Appendix E, Table B1. Per-capita income is projected to increase by approximately 16 percent between 1990 and 2010, as measured by 1990 constant dollars from a current level of \$13,802 to a future level of \$15,988.

Concurrent with population and housing increases, the four-County region is realizing substantial increases in employment. As indicated in Appendix E, Table C4, these levels of employment increase on an annual basis. A major portion of these increases are keyed to manufacturing and other industrially related jobs. It is reasonable to assume that employment growth in the four-County region will continue at a level of 7,000 to 9,000 jobs annually for the next five to ten years.

### Cloverdale Market Area Economic Growth

Three market area rings were drawn from the intersection of Highway 101 and First Street. There is a 2.5 mile, 5.0 mile and 10.0 mile ring. The 10.0 mile ring reflects the City's existing retail trade area, excluding consideration of service stations and other traveler-serving facilities.

It is estimated that the 10.0 mile ring will obtain approximately 1.5 percent of four-County housing growth in the years ahead which is higher than the existing housing share of 0.82 percent. The projections for the 2.5 mile ring reflect the substantial degree of residential development which has been occurring in the City during the past several years and which may be expected to continue.

### Local Commercial Demand Measures

#### **Retail Purchasing Power**

Detailed estimates of retail purchasing power are summarized in Appendix E, Table 2 for each of the three market area rings and further detailed in Tables B2a through B2c. Projections have been made for each of the eleven major retail categories regularly reported by the SBOE. Purchasing power estimates are made on a dual basis:

- In terms of 1990 constant dollars, based upon regional per-capita purchase estimates adjusted for local area income levels.
- Supportable building space, based on prototypical sales requirements of California retailers.

Total retail growth of the market areas is projected at relatively small levels, roughly 8,000 to 12,000 square feet annually. These demands derived from Cloverdale's local market areas will not be sufficient to permit the introduction of several major store types. This is because certain store types require sizing which would not be practical in Cloverdale. For example, a junior department store often requires 30,000 square feet of building space or more. An



automobile dealer generally requires sales of \$10 million per year or more. Many chain retailers require building space sizing of 5,000 square feet or more directed towards a specialized market. That portion which will be realized will be primarily of a localized convenience nature and will be best directed towards downtown improvement.

### **Local Office Demand**

Local office demand estimates for the three market area rings are contained in Appendix E, Table B3. These estimates cover office space occupied by individuals or companies serving a local market area, divided into three categories:

- General office users including real estate brokers, insurance brokers, accountants, engineers, etc.
- Financial offices including banks and savings and loan establishments
- Medical practitioners

As with local retail demands, local office demands will have applicability principally towards downtown improvement.

### **Industrial Demand Measures**

Industrial facilities will draw in particular upon manufacturing growth. There will be opportunity to obtain portions of growth in the services, construction, and wholesale trade sectors as well. It is estimated that more than 1,800 of the employees of the annual growth would require approximately 1.5 million square feet of building space annually in the four-County region. At an average building density of 15,000 square feet per acre, this growth would imply four-County demand of approximately 100 acres annually.

Another useful measure is provided by recent building permit data compiled in Appendix E, Table C3c. This data are obtained on the basis of dollar valuations. From this data, it is estimated building space based on an average per-square-foot valuation factor. This data indicates that industrial growth during the past five years has averaged about 1.6 million square feet annually.

Cloverdale has shown zero industrial development activity during the past five years as measured by industrial building permit valuations. Any significant new development cannot be based upon past trends. A number of site areas within Cloverdale would be well suited for industrial type development. Favorable factors include adjacent or nearby access to freeway, rail, and airport.

A reasonable target for Cloverdale to adopt would be approximately five acres of new development each year. This would result in development of approximately 75,000 square feet of building space annually, providing employment for approximately 100 workers.

### **Residential Demand Measures**

The State Department of Finance estimates that the City's current (1990) housing inventory is 2,109 units. This department also estimates that housing growth during the past five years has averaged 60 units annually, two-thirds of which has been single-family.

### **FINDINGS**

1. The City receives revenues of 35.1 percent of property tax collected within the City.
2. The City receives revenues of 1.09 percent of taxable sales within the City.
3. The City receives annual franchise fees of approximately \$20.00 per residential unit or equivalent.
4. The City collects a 7 percent Transient Lodging Tax on all room tax revenues.
5. The City receives business license fee equaling five cents per square foot of commercial and industrial space.
6. The City receives property transfer tax equaling 7.9 cents per \$1,000 of development valuation.
7. Many minor fees are received by the City on per-capita basis.
8. Annual fire protection costs are estimated at \$100 per residential unit and 6.25 per square foot of commercial/industrial space.
9. Annual police protection costs are estimated at \$100 per capita and 16.9 per square foot of commercial/industrial space.
10. Annual street maintenance costs are estimated at \$4,000 per lane-mile. Costs incurred due to new development will be directly offset by the \$150 per residential unit mitigation fee.
11. Park maintenance is estimated at \$7,000 per finished acre. The City will be limited to a parkland standard of 2.5 acres per 1,000 population based on the existing \$900 per residential unit parkland dedication fee.

12. The City's current park facilities mitigation fee is \$900 per residential unit. Under an average occupancy of 2.7 people/unit, this fee would cover park development of approximately 2.78 acres per 1,000 population. This amount of park acreage is just over one-half of the 5-acre/1,000 population City park standard being considered.
13. The City incurs administrative costs equaling 13.0 percent of direct costs.
14. Development control fees will cover costs the City incurs processing development.
15. This fiscal projection does not cover capital costs that may be incurred from rebuilding roads, expanding fire stations, or building additional public buildings. Investment earnings, sewer/water operations, airport operations, prospective assessment district revenues are not discussed in this fiscal projection.
16. Revenue derived by the City from prototypical development programs is greatest for hotels and auto dealerships. All other uses except multi-family and rural residential also provide positive cash flow.
17. There is high potential for commercial and industrial development in Cloverdale, especially near the proposed central bypass interchange.
18. The City's number one planning priority should be directed towards the establishment of a 20 to 30-acre freeway commercial area at the proposed Highway 101 central interchange.
19. Cloverdale has favorable factors to encourage industrial development. Factors include adjacent or nearby access to freeway, rail, and airport.
20. There are approximately 1,575 acres of vacant and developable land within the City's study area.
21. No industrial development activity has occurred in the past five years within the City.
22. Per-capita income is projected to increase by 16 percent between 1990 and 2010 in the four-county region.



# HOUSING

## PURPOSE AND SCOPE

This section of the MEA focuses on housing in Cloverdale. Its purpose is to identify local housing needs, special needs groups, and available resources to meet those needs. Based on this information, Goals, Policies, and Programs will be prepared subsequently which will guide housing development. The analysis is based on a report prepared by Casteñada & Associates. The report is located in Appendix F.

## PLANNING AREA DEFINITION

The documentation of housing needs and characteristics presents data principally for the incorporated area of Cloverdale. The City of Cloverdale is part of the Santa Rosa Standard Metropolitan Statistical Area (SMSA). It consists of two Census Tracts, 1541 and 1542. In 1980, the City of Cloverdale accounted for 1.31 percent of the total stock in Sonoma County or 2,109 units.

## HOUSING ELEMENT REVIEW

Section 65588(a) of the California Government Code provides that each local government shall review its housing element as frequently as appropriate to evaluate the following:

- (1) The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the state housing goal.
- (2) The effectiveness of the housing element in attainment of the community's housing goals and objectives.
- (3) The progress of the city, county, or city and county, in implementation of the housing element.

Such an evaluation would focus on the following:

- (a) "Effectiveness of the element" (Section 65588[a][2]): A comparison of the actual results of the earlier element with its goals, objectives, policies and programs. The results should be quantified where possible (e.g., rehabilitation results), but may be qualitative where necessary (e.g., mitigation of governmental constraints).
- (b) "Progress in implementation" (Section 65583[a][3]): An analysis of the significant differences between what was projected or planned in the earlier element and what was achieved.

- (c) "Appropriateness of goals, objectives, and policies" (Section 65588[a][1]): A description of how the goals, objectives, policies and programs of the updated element incorporate what has been learned from the results of the prior element.

Table C is a summary of review of the current Housing Element with respect to

- Goals
- Implementation Policies
- Programs
- Objectives

As required by State law, Cloverdale's present Housing Element includes a statement on quantified objectives. The City's quantitative objectives are summarized in Tables D and E with regard to new construction and rehabilitation.

The following material summarizes the progress made on meeting the goals, policies, programs and objectives of the 1985-1990 Housing Element. With regard to new construction, a total of 325 housing units were constructed which equalled 46 percent of the production objective. One 22-unit affordable development was built during the planning period and a 34-unit affordable development was under construction as of September 1990. There were no second units constructed although a second unit ordinance was adopted in August of 1983. With regard to issuing bonds, the City in early 1989 considered several alternative financing mechanisms to assist in the provision of affordable housing. Some of these options will continue to be explored and evaluated in the Housing Element Update. For instance, a redevelopment project area was established in 1987 and there is an opportunity to create an affordable housing fund through the 20 percent set-aside of tax increment increases.

In connection with the conservation and rehabilitation of existing housing, the City has established target areas. There is an apparent low interest on the part of owners in obtaining housing rehabilitation loans. Therefore, during the past four years, the CDBG financing has been expended on the repair of streets in low income areas. (i.e. Tarman neighborhood improvements.). In 1986, the City did enact a mobile home park rent regulation ordinance. This ordinance contributes to the affordability of the existing housing stock.

Energy conservation measures were over-emphasized, in the context of State housing law, in the 1985-1990 Housing Element. Data are unavailable to determine whether municipal energy consumption was reduced by 20 percent. Some dwellings were weatherized under the existing utility program but the specific number is unknown.

TABLE C

**CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES**

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
The provision of a broad range of housing choices and an adequate housing supply for all incomes, ages, and lifestyles.	<ul style="list-style-type: none"> <li>Support new developments which provides a mix of housing types, styles, sizes and building densities and which have safe and convenient access to schools, parks, transportation, commercial facilities and employment opportunities.</li> </ul>	1. Continue to monitor the supply of vacant land and evaluate the development capability to determine if adequate sites exist to provide a range of densities including sites for mobile homes, manufactured housing and rental units.	700 new units by 1990.
	<ul style="list-style-type: none"> <li>Encourage the provision of an adequate number of both rental and owner units in order to maintain an optimal vacancy rate.</li> </ul>	2. Develop a master plan for the expansion and improvement of public infrastructure and services to accommodate the projected growth of the City and actively seek adequate funding to provide such services.	Expand water storage capacity; improve sewer collection system; provide additional fire, police, recreation and school services, as needed.
	<ul style="list-style-type: none"> <li>Provide incentive for the integration of low and moderate income housing in existing and proposed housing developments by offering regulatory concessions, where appropriate, and employing developmental controls.</li> </ul>		

Continued



TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
	<ul style="list-style-type: none"> <li>Support efforts to minimize development costs, interest rates and other housing financing costs.</li> </ul>	<ol style="list-style-type: none"> <li>Adopt a density bonus policy in accordance with state law to outline the process and procedure for bonus incentives; establish criteria for the selection of suitable sites and target housing types to meet the identified needs of the community.</li> <li>Adopt a second unit ordinance that will identify allowable areas for the construction of additional units on large lots in single family neighborhoods and establish requirements to preserve the character of existing neighborhoods.</li> </ol>	<p>50 new units for low/moderate income households over 5 years (10 units per year).</p> <p>5 units per year or 25 additional units for lower income households by 1990.</p>

Continued

TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
		5. Work with local developers and actively seek sources of funding through governmental programs and private financing to meet the housing needs of low and moderate income households by coordinating with the Sonoma County Housing Authority as the principal administrator of the programs.	Evaluate the feasibility of issuing bonds (possible joint venture with other communities) to provide below market rate financing for first-time homebuyers and the construction of rental units.
To conserve and rehabilitate the existing supply of affordable housing and maintain the quality and integrity of established neighborhoods.	<ul style="list-style-type: none"> <li>• Encourage owners and tenants of dilapidated or deteriorated housing units to rehabilitate or reconstruct their dwellings.</li> <li>• Preserve historic and architecturally significant structures, sites and neighborhoods with the community.</li> </ul>	1. Survey the condition of existing housing and establish target areas by providing free inspections to identify potential hazards, code violations, and possible energy conservation measures that could be remedied through a voluntary code enforcement program.	Identify low and moderate income neighborhoods needing rehabilitation.

Continued

TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
	<ul style="list-style-type: none"> <li>Encourage the continued owner-occupancy of the City's older housing stock and discourage high speculation in rehabilitation areas in order to conserve the existing supply of affordable housing.</li> <li>Encourage the participation of homeowners associations and neighborhood groups in initiation of street beautification programs and neighborhood restoration in areas of need.</li> </ul>	<ol style="list-style-type: none"> <li>Evaluate the adequacy of existing infrastructure in low and moderate income neighborhoods and identify problem areas.</li> <li>Work with the Sonoma County Housing Authority to set up a rehabilitation program and apply for rehabilitation funds such as Community Development Block Grants, Section 8 and other available programs.</li> <li>Develop a program to identify historic residences and seek funding to rehabilitate and maintain these structures.</li> </ol>	<p>Maintain existing public improvements where needed.</p> <p>Rehabilitate 10 units per year (50 units by 1990), and provide public infrastructure improvements in low and moderate income neighborhoods.</p> <p>Rehabilitate architecturally significant structures.</p>

Continued



TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
To reduce residential energy consumption and promote the use of alternative energy sources.	<ul style="list-style-type: none"> <li>Encourage the use of solar energy and conservation measures in the design of new subdivisions and enforce new state energy standards.</li> <li>Promote energy conservation measures in the rehabilitation of the City's older housing stock.</li> </ul>	1. Develop a public education and demonstration program in the area of energy conservation and create an awareness of available programs by working with the local utility to evaluate municipal energy use and implement energy conservation measures in municipal buildings.	Reduce municipal energy consumption 20%.
		2. Establish a voluntary energy conservation retrofit program in which owners and renters will be encouraged to insulate water heaters and weatherize their homes.	Weatherize 20 units per year under the existing utility program.
		3. Actively enforce new state energy standards of Title 24.	Ensure energy conservation in new developments.

Continued

TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
		4. Adopt solar access guidelines providing design criteria and procedures for the review of development plans to ensure solar access in future housing developments.	Promote the use of solar energy.
		5. Initiate a community-wide recycling program by renegotiating the refuse disposal contract to include separate pick-up of newspapers, cans and bottles at curbside or in bins throughout the City.	Prolong life of existing landfill, reduce waste and conserve non-renewal resources.
To provide safe, decent, and affordable housing and promote equal housing opportunities for all economic segments of the community.	<ul style="list-style-type: none"> <li>• Encourage housing developments which meet the special needs of elderly, handicapped, single parents, and minorities.</li> </ul>	1. Provide public information on available housing and assistance programs by referral to the Sonoma County in developing new programs to assist low and moderate income households.	Assistance for 25 additional households from Existing Section 8 Housing Assistance Program.

Continued

TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
	<ul style="list-style-type: none"> <li>Encourage fair housing practices and continue efforts to ban discrimination in housing based on race, age, sex, family size, or marital status.</li> </ul>	<ol style="list-style-type: none"> <li>Assist local residents who experience housing discrimination or landlord/tenant conflicts by referral to the Sonoma County Rental Information and Mediation Service (SCRIMS) and other local agencies than handle discrimination complaints.</li> <li>Apply for all appropriate federal and state housing assistance programs consistent with staff capacity.</li> <li>Review development applications for the provision of handicapped access and target low income units for the special needs of elderly, single parents, large families and minority households.</li> </ol>	<p>Set up a process for assisting local residents with housing discrimination problems.</p> <p>Provide 60 rental units of assisted housing for lower households through FmHA Section 515.</p> <p>Target low income units to meet the special needs of the community.</p>

Continued



TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
To provide a balanced residential environment and maintain a sense of neighborhood.	<ul style="list-style-type: none"> <li>• Ensure residential developments are compatible with surrounding neighborhoods in terms of architectural design, layout, and traffic circulation.</li> </ul>	1. Evaluate proposed developments for consistency with the Goals and Policies of the City's General Plan and follow guidelines contained in the Land Use, Seismic/Safety, Open Space and Conservation Elements.	General Plan Consistency
	<ul style="list-style-type: none"> <li>• Encourage designs that provide adequate facilities, open space and recreation opportunities, outdoor living spaces, and privacy for each dwelling unit.</li> <li>• Promote retention of existing natural features and vegetation in the design of new developments.</li> </ul>	2. Designate priority of development areas to coincide with the capacity and expansion of public facilities and determine appropriate residential densities, public infrastructure improvements and environmental impacts of projected development in these designated growth areas.	Provision of sufficient sites with adequate facilities to accommodate projected growth.

Continued

TABLE C (Cont.)

CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

GOAL	IMPLEMENTATION POLICIES	PROGRAMS	OBJECTIVE
	<ul style="list-style-type: none"> <li>• Encourage residential developments that emphasize energy and water conservation and minimize energy efficient travel patterns.</li> <li>• Minimize housing construction in environmentally hazardous areas.</li> </ul>		

Source: Castañeda and Associates

TABLE D

CITY OF CLOVERDALE  
SUMMARY AND QUANTIFIED OBJECTIVES  
Objectives for the Creation of New Housing Units 1985-1990

	VERY LOW	LOW	MODERATE	ABOVE MODERATE	TOTAL
Second Units	25				25
Density Bonus			50		50
Rental		20	120		140
Mobile/Manufacture		30	55		85
Homes				400	400
TOTAL	25	50	225	400	700

Source: Castañeda and Associates



TABLE E

CITY OF CLOVERDALE  
HOUSING STOCK 1985-1990  
Objectives for the Rehabilitation and Conservation of the  
Existing Housing Stock

OBJECTIVE	NO. OF UNITS	SOURCE
Rehabilitation	50 units	CDBG and Section 8
Weatherization	100 units	Utility Program
Housing Assistance	25 households 60 units	Section 8 rental FmHA Section 515

Source: Castañeda and Associates

In the area of providing affordable and equal housing opportunities, there are 16 households in the City who are financially assisted under the provisions of the Section 8 rental assistance program; the bedroom distribution is noted below:

●	Studio	1
●	1 Bedroom	2
●	2 Bedrooms	9
●	3 Bedrooms	2
●	4 Bedrooms	<u>2</u>
TOTAL		16

The City does cooperate with the Sonoma County Rental Information and Mediation Services, Inc. (SCRIMS) who provides fair housing services throughout the County.

During the past five years, there were significant housing accomplishments such as:

1. Neighborhood physical and infrastructure improvements.
2. Continued financial assistance to renter households in need by the Section 8 rental assistance program.
3. Preservation of affordable housing by enactment of a mobile home park rent regulation.
4. Encouragement of a variety of housing types by enactment of a second unit ordinance.
5. Establishment of a redevelopment project area.
6. Evaluation of several alternative financial measures, including an in-lieu fee, to facilitate the production of affordable housing.

From a numerical viewpoint, the objectives were not met and overstated practical, feasible achievements. For instance, there were no density bonus or second units constructed. The new, updated housing element will focus on:

1. Residential rehabilitation alternatives.
2. A 5-year plan for use of the Redevelopment Agency Low and Moderate Housing Fund (20% set-aside).
3. Continuation of effective housing programs and strategies.

4. Establishing quantitative objectives that represent the maximum feasible number of housing units that can be conserved, rehabilitated and constructed.

## HOUSING STOCK

During the past decade, the City's housing stock has gradually increased from 1,656 to 2,109 housing units. Most of the gain in the housing stock was in single-family detached homes. Cloverdale's housing stock characteristics are presented in Table F.

## HOUSING CHARACTERISTICS

### Tenure and Length of Residence

According to the 1980 Census, residents of 63.1 percent of all households had lived in their dwelling units for five years or less. This was true for both owners and renters, as Table G indicates.

### Overcrowding

The Census defines overcrowding as more than one person per room. According to the 1980 Census, there were only 39 occupied housing units (2.42 percent) with 1.01 persons per room.

### Household Financial Characteristics

A household classified as very low income earns 50 percent of the median income. A low income household earns between 50 and 80 percent of the median income. A moderate income household earns between 80 and 120 percent of the median income.

Income characteristics of the City per the 1980 Census are summarized below:

- Median Household Income: \$16,682
- Median Owner Income: \$18,250
- Median Renter Income: \$15,263

Table H provides a current estimate of Cloverdale's household income distribution. The income limits defining various income groups for Sonoma County are shown in Table I.



TABLE F  
CITY OF CLOVERDALE  
COMPOSITION OF THE HOUSING STOCK – 1980 TO 1990

HOUSING TYPE	1980	1990	GAIN
Single-Family			
Detached	1,182	1,470	288
Attached	18	18	-0-
Multi-Family			
2 to 4 units	89	119	30
5 plus units	229	310	81
Mobile Homes	<u>138</u>	<u>192</u>	<u>54</u>
Total	1,656	2,109	453

Source: 1980 Federal Census of Housing and Population. State Department of Finance, Population Research Unit, "Population and Housing Unit Estimates, Series E", January 1990.

TABLE G  
CITY OF CLOVERDALE  
YEAR HOUSEHOLDER MOVED INTO UNIT

YEAR	NUMBER OF HOUSEHOLDS	PERCENTAGE DISTRIBUTION
1979 - March 1980	431	27.1%
1975 - 1978	573	36.0%
1970 - 1974	272	17.1%
1960 - 1969	187	11.8%
1950 - 1959	95	6.0%
Pre - 1949	<u>32</u>	<u>2.0%</u>
TOTAL	1,590	100.0%

Source: 1980 Census of Population and Housing, Summary Tape File (STF-4).

TABLE H  
CITY OF CLOVERDALE  
HOUSEHOLD INCOME DISTRIBUTION – 1990

INCOME	NUMBER OF HOUSEHOLDS	PERCENTAGE
Less than \$5,000	112	5.7%
\$5,000 to \$9,999	249	12.7
\$10,000 to \$14,999	249	12.8
\$15,000 to \$19,999	194	9.4
\$20,000 to \$24,999	119	6.1
\$25,000 to \$29,999	151	7.7
\$30,000 to \$34,999	158	8.1
\$35,000 to \$39,999	117	6.0
\$40,000 to \$49,999	204	10.4
\$50,000 to \$59,999	162	8.3
\$60,000 to \$74,999	121	6.2
\$75,000 to \$99,000	84	4.3
\$100,000 plus	<u>48</u>	<u>2.4</u>
Total	1,958	100.0 %

Source: Department of Finance, Demographic Research Unit, Population and Housing Units, January 1, 1990. Urban Decision Systems, Inc., Demographic and Income Profiles, 1980, 1990, and 1995.

TABLE I  
CITY OF CLOVERDALE  
SONOMA COUNTY INCOME LIMITS

INCOME GROUP	HOUSEHOLD SIZE (PERSONS)			
	1	2	3	4
Very Low	14,200	16,250	18,250	20,300
Lower	22,600	25,800	29,000	32,250
Medium	28,200	32,250	36,250	40,300
Moderate	33,850	38,700	43,500	48,350

Source: California Department of Housing and Community Development, "New Income Limits" (March 21, 1990)



## SPECIAL NEEDS GROUPS

### Handicapped

Within the Census, a disabled household is one in which the householder has an employment-related or transportation-related disability. In California, approximately one in seven of the state's households had a disability. In general, disabled households have the following characteristics (Statewide Housing Plan, 1987):

- Tend to be small
- Tend to be elderly
- Are predominantly low income
- Move much less often
- Have below average housing costs, but, nevertheless, pay higher percentages of income for housing

1980 Census statistics pertaining to Cloverdale are listed below:

- Work disability - 316 persons
- Public transportation disability - 76 persons

### Elderly

Within State law, elderly is defined as age 60 and older. Almost 25 percent of the households in California are made up of elderly people. General characteristics of elderly households are as follows (Statewide Housing Plan, 1987):

- Have a higher homeownership rate
- Are predominantly low income
- Tend to live in small households
- Are more likely to be non-family households
- Move much less often
- Have much lower overcrowding rates

With increasing age:

- Household income, household size, and homeownership begins to fall
- Housing affordability problems begin to increase

There is no uniform definition of elderly. According to the recent data, one in five persons residing in Cloverdale are 65 years and older. The City's population age distribution is summarized in Table J.

TABLE J  
CITY OF CLOVERDALE  
POPULATION AGE DISTRIBUTION - 1990

AGE	NUMBER	PERCENTAGE DISTRIBUTION
0 to 5	335	6.9%
6 to 13	374	7.7%
14 to 17	286	5.9%
18 to 20	199	4.1%
21 to 24	223	4.6%
25 to 34	724	14.9%
35 to 44	826	17.0%
45 to 54	510	10.5%
55 to 64	437	9.0%
65 plus	<u>942</u>	<u>19.4%</u>
<b>TOTAL:</b>	<b>4,856</b>	<b>100.0%</b>

Source: Castañeda and Associates

Total number of households equal occupied housing units per California Department of Finance, Demographic Research Unit, Population and Housing Units, January 1, 1990. Percentage distribution from Urban Decision Systems, Inc., Demographic and Income Profiles, 1980, 1990, and 1995.

Note: Preliminary 1990 Census data gives a 1990 population of 4,709 for Cloverdale. This represents an increase of 18 percent from the 1980 population. This increase is the smallest for all Sonoma County cities. (Source: San Francisco Chronicle and U.S. Census Bureau).

## Large Families

Large households, defined in the 1980 Census as households with five or more persons, have special housing needs. Large households tend to have difficulties purchasing housing because large housing units are rarely affordable and rental units with three or more bedrooms may not be common in many communities (LHEAP, December 1989). About 7 percent of the City's households are large families. Please refer to Table K.

## Farmworkers

Housing for farmworkers presents problems due to rural locations, seasonal nature of the work, and the need for mobility on the part of many of the workers. Of California households, .9 percent included farmworkers. This only represents farmworkers within a household at the time of the Census and underestimates farmworkers within the State.

The following are distinctive characteristics of California's farmworkers households (Statewide Housing Plan 1987):

- They have low homeownership rates;
- They have large household sizes, and renter households are as large as those of owners;
- Married couples strongly predominate among both owners and renters, and most families include minor children;
- They live disproportionately in the housing which is in the poorest condition;
- They tend to have low incomes and have high rates of poverty; and
- They have high rates of overcrowding.

According to the 1980 Census (STF-4, summary tape file), there were 36 persons employed in the farming, forestry and fishing industries who resided in Cloverdale. Long-range projections by the Association of Bay Governments indicate a steady decline in agriculture-mining related employment in Sonoma County from 6,589 in 1980 to 4,960 in 2005. Based on these data, it is assumed that the farmworker population is not extensive now or in the future in Cloverdale.

## Female Heads of Households

Approximately 10 percent of California's households are made up of a female householder with children. Female householders with families have the following characteristics (Statewide Housing Plan 1987):

- They have low homeownership rate;
- They tend to be younger;

TABLE K  
CITY OF CLOVERDALE  
HOUSEHOLD SIZE DISTRIBUTION - 1990

HOUSEHOLD SIZE	NUMBER OF HOUSEHOLDS	PERCENTAGE DISTRIBUTION
1	491	25.1%
2	689	35.2%
3 to 4	638	32.6%
5 Plus	<u>140</u>	<u>7.1%</u>
TOTAL	1,958 <sup>1</sup>	100.0%

Source: Castañeda and Associates

<sup>1</sup>Total number of households equal occupied housing units per California Department of Finance, Demographic Research Unit, Population and Housing Units, January 1, 1990.



- Families with children predominate;
- They have low incomes and high poverty rate;
- Overcrowding rates are high; and
- They pay high percentages of income for housing.

The statistics below summarize data on this household characteristic per the 1980 Census:

- Family female head of household: 216
- Non-family female head of household: 266
- 27 percent separated, widowed, divorced

### Homeless

In Sonoma County, 3,779 persons received assistance through the AFDC Homeless Assistance Program during the one year period from July 1988 through June 1989. These statistics do not include single persons or families that are ineligible for AFCD assistance but are nonetheless homeless. The number of homeless persons in Sonoma County is probably higher than 3,779. There are no statistics specific to Cloverdale on this special needs group at this time. (Sonoma County Comprehensive Homeless Assistance Plan, July 1990). There is one emergency shelter in Cloverdale of five beds (North County Community Services). According to the shelter's director, the shelter served 251 men, 250 women, and 333 children during a 12-month period.

### Housing Stock Condition

Cloverdale's current housing stock includes an estimated 2,109 dwelling units as of January 1990. Most indicators show that the City's housing stock is essentially adequate. For example, in 1980 there were only five dwellings with inadequate plumbing facilities. Chart 2 located in Appendix F summarizes the basic structural condition of the City's housing stock based on a 1986 land use survey. Approximately 16 percent of the City's housing stock in 1986 was either deteriorating or dilapidated. A majority of the deteriorating and dilapidated stock is located in Zone E, between Cloverdale Boulevard to the west, South Street to the north, railroad tracks and the sewer treatment pond to the east, and the existing City limits to the south.

### **VACANCY RATES**

Data on Cloverdale's unoccupied housing units are published annually by the State Department of Finance. In the past decade, the vacancy rate (unoccupied housing units as a percentage of total stock) has increased from 3.93 percent to 7.15 percent.

## EXISTING AND PROJECTED NEED

Existing need is defined as resident lower income households that are paying more than 30 percent of their income on housing costs. According to the Association of Bay Area Governments (ABAG), there are 263 lower income Cloverdale households paying more than they can afford for housing expenses. Of the households, 112 are owner and 141 are renter occupants. An estimated 44 percent of all lower income households are overpaying.

Projected need refers to the number of new housing units that should be constructed over a 5-year time frame. These projections are prepared by ABAG and are reported in Table L. Considering that the City's housing stock is just above 2,100 dwellings, ABAG is projecting a considerable need level in the next five years (1991-1996).

## VACANT LAND SURVEY

Section 65583(a)(3) of the Government Code requires that the Housing Element include a site availability analysis with respect to:

- An inventory of land suitable for residential development, including vacant sites and sites having potential for redevelopment.
- An analysis of zoning in relationship to those sites.
- Adequacy of public services and facilities to the sites.

### Vacant Sites

Vacant and under-utilizes sites are listed in Appendix F, Attachment A. As indicated the City has a capacity for approximately 2,000 dwelling units. In 1990, some affordable units were built as a part of approved projects. These are indicated on the chart. Other vacant and under-utilized properties have been deemed suitable for affordable units. Overall, the City has the capacity to meet its regional fair share allocation.

### Public Services and Facilities

There are some potential constraints to the development of housing in the future. A summary of potential constraints is listed below (Cloverdale Department of Public Works, September 1990).

TABLE L  
CITY OF CLOVERDALE  
PROJECTED HOUSING NEEDS - 1991-1996

INCOME GROUP	NUMBER OF HOUSING UNITS
Very Low	227
Low	125
Moderate	172
Above Moderate	<u>259</u>
TOTAL	783

Source: Association of Bay Area Governments, Housing Needs Determination,  
January 1989

Water	Upgrade supply main from well field to reservoir: <ul style="list-style-type: none"> <li>• Additional storage reservoir in Zone 1;</li> <li>• Additional storage reservoir in Zone 2;</li> <li>• Upgrade main capacity from Cherry Creek reservoir area south to Furber Development.</li> </ul>
Sewer	Land acquisition for plant expansion: <ul style="list-style-type: none"> <li>• Sewer transmission main - Lile Lane, Santana Lane, South Cloverdale Boulevard;</li> <li>• Upgrade mains to accommodate new developments in several areas.</li> </ul>
Streets	Upgrading/improving existing streets in order to serve the existing and new developments.
Storm Drains	Participation in off-site storm drain to increase capacities to serve new development.

## ASSISTED RENTAL HOUSING AT-RISK FOR CONVERSION

Section 65583(c)(4) states that a housing program shall describe actions to "conserve and improve the condition of the existing affordable housing stock." In addition, a recent amendment to housing element law (Chapter 1451, Statutes of 1989) requires all housing elements to include, by January 1, 1992, additional needs analyses and programs to address the potential conversion of assisted housing developments to non-low-income housing uses during the next ten year period. Assisted housing developments are defined to include any multi-family rental housing assisted under any of the following programs:

1. Federal: Section 8, 213, 221(d)(3), 236, 202, and 101 - CDBG and FmHA Section 515.
2. State: Multi-family revenue bond.
3. Local: Multi-family revenue bond, redevelopment, in-lieu, inclusionary, and density bonus programs.

The King's Valley Apartments are considered a development "at risk" of conversion. (The California Housing Partnership Corporation, Inventory of Federally Subsidized Low-Income Rental Units at Risk of Conversion, March 1989). This development consists of 99 housing units where the households receive Section 8 rental assistance. There are no other developments at risk at this time. In the future, the City may contribute financially and with other incentives to enable the construction of affordable housing. During a review of these



developments, the City will take steps to ensure continued affordability of these units and develop a plan of action in anticipation of the conversion of the development 15 to 20 years in the future.

## ENERGY CONSERVATION OPPORTUNITIES

An analysis of opportunities for energy conservation with respect to residential development is required by Section 65583(a)(7) of the Government Code. According to the State Department of Housing and Community Development:

"The purpose of this analysis is to show that the locality has to consider how energy conservation might be achieved in residential development and how energy conservation requirements may contribute to the affordability of units."

Following are examples of local policies, plans, and development standards that have been successful in reducing energy costs or consumption:

- Promotion of compact, higher density, and infill development;
- The active, constructive enforcement by local building officials of existing state residential energy conservation standards;
- Standards for street widths, landscaping of streets and parking lots to reduce heat loss or provide shade; and
- Standards for energy efficient retrofits to be met prior to resale of homes."

The State Office of Planning and Research (OPR) has offered the following advice on this code requirement:

- Opportunities in the design and construction of individuals units.
- Opportunities in the design of subdivision.
- Assessment of the effect of energy conservation measures on the cost of housing in the long run.
- Proximity of proposed residential development to employment centers, schools, and other services and availability of transit services.

The City enforces Title 24 of the State Building Code which establishes energy standards. Additional opportunities will be explored on infill housing sites and City-assisted affordable housing development.

## EQUAL HOUSING OPPORTUNITY

Section 65583(c)(5) requires that the housing program:

"Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, or color."

With regard to complying with this provision of the State law, the Department of Housing and Community Development (HCO) has offered the following advice:

"Since state and federal laws uniformly outlaw most kinds of housing discrimination, local governments' role is to identify strategies which will support and implement these laws. Such strategies may include consultation with fair housing and counseling organizations in the community to document the incidence of housing discrimination and the availability of services to address the problem. If these services are not available or are inadequate, the locality can require technical assistance from the district office of the Department of Fair Employment and Housing to develop specific local government actions to promote fair housing opportunity.

"In small localities, the local program may involve the dissemination of information on fair housing laws, and referrals to the district office of the Department of Fair Employment and Housing or other appropriate agencies. In large and/or urban jurisdictions, more direct program action would be appropriate. Examples of such programs include a commitment to use Community Development Block grant funds to support fair housing and counseling services. Also the locality may wish to create a fair housing council which can investigate and resolve discriminatory complaints, and advocate specific equal housing opportunity actions before community and business organizations."

Cloverdale is included in the Sonoma County Urban County CDBG Grant Application. A portion of grant resources are allowed to the Sonoma County Rental Information and Mediation Services, Inc. (SCRIMS). Established in 1981, SCRIMS provides services on a countywide basis including tenants who have housing discrimination complaints. In the past nine years, cases in Cloverdale have accounted for 1 percent of all the cases handled by SCRIMS. During this time discrimination complaints have accounted for 18 percent or less of all cases processed on a countywide basis. In the past fiscal year, (7-1-89 to 6-30-90), there were zero cases originating in Cloverdale.

## GOVERNMENTAL CONSTRAINTS

Section 65583(a)(4) of the Government Code mandates an analysis of how governmental factors affect the maintenance, improvement, and development for all income groups. The relevant legislation cites the following potential or actual constraints:

- Land use controls (Land Use Element and Zoning);
- Building codes and their enforcement;
- Site improvements;
- Fees and other exactions; and
- Local processing and permit procedures.

### Land Use Controls

The City's land use controls provide for a variety of housing types at densities that enable the development of affordable housing. The "High Density" land use category, for example, permits residential developments at a density of 16 plus units per acre. In time, a "density bonus" may be necessary if there are no financial incentives to facilitate new affordable units. The R-3 Multiple-Family district permits densities up to 20 units per acre. Residential units may also be built in some commercially-designated areas at higher densities. Consequently, the City's basic land use controls are not a major constraint to the production of affordable housing.

### Land Use Element

The current Cloverdale Land Use Plan provides for six residential land use classifications, as summarized in Table M.

### Zoning

The Cloverdale Zoning Ordinance includes five residential land use categories and one mixed use district that permits residential in combination with commercial uses. The zoning districts generally are consistent with the City's growth patterns and geography, with single-family and multiple-family districts in the urban core, rural zoning surrounding the urban core, and the balance in hillside residential.

Estate Residential (RE): Requires rural-oriented lots at least one acre in size. Rezoning surrounds Cloverdale's urban core.

Single-Family Residential (R1): Provides for suburban size lots mostly seen in subdivisions with parcel size being at least 6,000 square feet; also, limited community services related to housing via Use Permit procedures.

TABLE M  
CLOVERDALE LAND USE DESIGNATIONS

RESIDENTIAL CLASSIFICATION	DENSITY RANGE (GROSS ACRES)	NUMBER OF ACRES	LOCATIONAL CRITERIA
Hillside	To be determined	510	West of Foothill Blvd. Plan Zone and designated generally by the 400' contour elevation at the base of the 600' contour elevation (water service level).
Low Density	.2 to 1.0	265	Acres where existing parcelization and development patterns, physical constraints and access problems all contribute to the determination of the number of units that should be located on a site.
Single Family	4.0 to 6.0	265	Applied to those lands within the City that are presently or anticipated to be developed as single family residential settlements.
Medium Density	6.0 to 15	62	Encourage and concentrate the development of housing of a more intense nature than single-family - duplexes, tri-plexes, apartments, condominiums and townhouse developments.

Continued



TABLE M (Cont.)

## CLOVERDALE LAND USE DESIGNATIONS

RESIDENTIAL CLASSIFICATION	DENSITY RANGE (GROSS ACRES)	NUMBER OF ACRES	LOCATIONAL CRITERIA
High Density	16.0 plus	41	Areas of intense land use near major transportation routes and highways; and in proximity to commercial and employment areas.
Planning Reserve	4.0 to 6.5	135	Large contiguous holdings within the urban expansion area of the City which represent a developable land resource base unconstricted by any predetermined street grid network.

Source: Castañeda and Associates

Two-Family Residential (R2): Achieves medium density via duplexes or two separate single-family dwellings on a lot; at a density of one unit per 3,000 square feet; also, provides for limited community services and mobile home parks up to 7 units/acre via Use Permit procedures.

Multiple-Family Residential (R3): Provides for the highest density allowed by Cloverdale via garden apartments, townhouses, and condominiums in addition to more conventional dwellings; a density of one unit per 1,500 square feet coupled with good design can yield densities up to 20 units per acre.

Office and Multi-Family Residential (OR): Allows mixing of compatible semi-commercial and residential uses; a variety of offices, financial uses, and medical facilities can exist in harmony with medium to high density multi-family residential uses.

Hillside Residential District (RH): Provides criteria for hillside development relative to the planning, design, and development of building site in hillside areas in such a fashion as to provide maximum in safety and human enjoyment and to achieve land use densities in keeping with the General Plan.

Residential Zoning land use controls are described in Table N.

### Residential Parking

Table O establishes the ratios of parking spaces to units and numbers of bedrooms. The standard for single-family housing is two spaces per unit. The standards for multi-family units appear appropriate but may need re-evaluation on a case-by-case basis depending on the market to be served and the mix of 1, 2, and 3-bedroom units. The standard for senior citizens should be re-examined. New forms of senior housing, such as congregate housing, have lower requirements than one space per unit.

### Building Codes and Their Enforcement

The City has adopted the Uniform Building Code, 1988 edition. The Uniform Building Code was amended in a few areas including additions with respect to Master Plans, swimming pools, exterior wall coverings; roof material; roof construction; re-roofing materials; and non-collapsibility of awnings.

With regard to existing housing, the City has adopted:

- Uniform Code for the Abatement of Dangerous Buildings, 1988 edition.
- Uniform Housing Code, 1988 edition, as published by the International Conference of Building Officials.

TABLE N  
CITY OF CLOVERDALE  
RESIDENTIAL ZONING LAND USE CONTROLS

DISTRICT	PURPOSE	USES PERMITTED	MINIMUM LOT AREA	PARKING REQUIRED
R-E: Residential Estate District	To create areas of single family living at a low density surrounding Cloverdale's urban core.	Single family dwellings.	1. Corner lot - forty thousand sq. ft. 2. Interior lot - forty thousand sq. ft.	Parking is to be provided as required under Section 2.0.
R-1: Single-Family Residential District	To stabilize and protect the residential character - to promote and encourage a suitable environment for family life. The R-1 District is intended for single family homes and the community services appurtenant thereto.	Single family dwelling; Crop and tree farming; constructed concurrently with or subsequent to the main building; One sign not over six square feet in area pertaining to the sale, lease or rental of property on which it is located.	1. Corner lot - seven thousand sq. ft. 2. Interior lot - six thousand sq. ft.	Parking is to be provided as required under Section 2.0.
R-2: Two Family Residential District	To provide areas for the development of duplexes, attached or detached two-family dwellings and dwelling groups at medium densities as in locations indicated on the General Plan.	All uses permitted in the R-1 District (Section 4.22). Duplexes or two separate one family dwellings.	1. Corner lot - seven thousand sq. ft. 2. Interior lot - six thousand sq. ft.	Parking is to be provided under Section 2.0.

Continued

TABLE N (Cont.)  
CITY OF CLOVERDALE  
RESIDENTIAL ZONING LAND USE CONTROLS

DISTRICT	PURPOSE	USES PERMITTED	MINIMUM LOT AREA	PARKING REQUIRED
R-3: Multiple Family Residential District	To provide suitable locations for housing such as garden apartments, townhouses, duplexes, including condominium developments. The high density category depicted by the General Plan is intended to guide development for this district.	All uses permitted in R-2 District. Multiple family dwellings, apartments, and dwelling groups. Signs not over eight sq. ft. appurtenant to the principal use of the property.	<ol style="list-style-type: none"> <li>1. Corner lot - seven thousand sq. ft.</li> <li>2. Interior lot - six thousand sq. ft.</li> </ol>	Parking is to be provided as required under Section 2.0.

Source: Castañeda and Associates



TABLE O

CITY OF CLOVERDALE  
RESIDENTIAL PARKING SPACE

SINGLE-FAMILY	MULTI-FAMILY	MOBILE HOME PARKS	SENIOR CITIZEN DWELLING
2 spaces per unit, 1 of which must be covered, both of which must be located outside of the required setback.	1½ per studio/1-bdrm. apartment, 1 of which must be covered. 2.0 spaces for each unit of 2 or more bedrooms, 1 of which must be covered. At the discretion of the Planning Commission, a maximum of 30% of the required parking spaces may be set aside as compact spaces if the development is targeted for affordable housing.	1.75 spaces per unit, which may be in tandem, 1 of which must be covered.	1 covered space per unit or as determined by the Planning Commission.

Source: Castañeda and Associates

These two codes are standard, uniform codes used throughout the State. The standards and requirements are, therefore, typical of practice in California. The enforcement of the codes may create problems for some low income residents who cannot afford to make the repairs made necessary per code requirements. In the future, a re-design home rehabilitation program should be coordinated with the City's code enforcement program.

### **Site Improvement Requirements**

The City requires on-site and off-site improvements typical for suburban subdivisions. These improvement requirements include for example: streets; connection to water and sewer service; street lights; curbs, gutters and sidewalks; street trees (one per parcel); and fire suppression. Block walls, which often are an expensive off-site improvement, are not required along the perimeter of tract subdivisions.

### **Fees and Other Exactions**

There are a wide variety of fees for engineering, planning and development. Table P summarizes key fees by category as of September 1990.

### **Processing Times**

The time limits shown on Table Q indicate the general span of time which is required to process a completed application. The time frames reflect what is needed to adequately evaluate and research each project, prepare Staff Reports, and provide public notice. The types of applications are split into what is noted as "Major" and "Minor." This distinction relates to whether a Categorical Exemption can be issued, which involves minimal review, or a Negative Declaration or Environmental Impact Report is required in accordance with the California Environmental Quality Act.

## **NON-GOVERNMENTAL CONSTRAINTS**

Section 65583(a)(5) of the Government Code requires that Cloverdale's housing element incorporate an analysis of potential and actual non-governmental constraints including:

- Availability of financing;
- Price of land; and
- Cost of construction.

### **Availability of Financing**

According to the State Department of Housing and Community Development, the analysis of the availability of financing should consider whether financing is generally available, whether interest rates are significantly different from surrounding areas, and whether there

TABLE P  
CITY OF CLOVERDALE  
DEVELOPMENT FEES

FEE	AMOUNT
Architectural/Design Review:	
15 or fewer du's	\$220/each
15 +	\$220/base fee + \$10 for each du in excess of 15
Environmental Impact Report:	\$1,000 minimum deposit + cost of consultant
General Plan Amendment	\$845/each
Rezoning/Prezoning	\$340/each
Preliminary Development Plan	\$800/base fee + \$50/per acre
Major Subdivision Map	\$750/base fee + \$20/each lot or d.u.
Mobile Home Park	\$20/per site or \$160/per acre, whichever is less minimum \$600 per development
Multiple Residential (Condominiums, apartments, etc.)	\$300/per acre with a minimum of \$600

Continued.

TABLE P (Cont.)  
CITY OF CLOVERDALE  
DEVELOPMENT FEES

FEE	AMOUNT
Single Family Residential Major Subdivision	\$40/per lot or \$160 per acre whichever is less. Minimum fee \$600/per development
Large Lot Residential Major Subdivision Large Lot Residential where average. If size is 10 acres or more.	\$50/per lot with minimum of \$600 per development.

Source: Castañada & Associates

Note: du = dwelling unit



**TABLE Q**

**CITY OF CLOVERDALE**

**PROCESSING TIMES BY APPLICATION CATEGORY - 1990**

CATEGORY OF APPLICATION	TIME SPAN MINIMUM - MAXIMUM
Variances:	
A. Minor	15-30 days
B. Major - with Negative Declaration	30-60 days
Use Permits:	
A. Minor	15-30 days
B. Major - with Negative Declaration	30-60 days
Subdivisions:	
A. Tentative Parcel Map - with Categorical Exemption	30-45 days
B. Tentative Parcel Map - with Negative Declaration	30-60 days
C. Tentative Parcel Map - with Environmental Impact Report	90 days-1 year
D. Tentative Map - with Negative Declaration	30-50 days
E. Tentative Map - with Mitigated Negative Declaration	45-90 days
F. Tentative Map - with Environmental Impact Report	90 days-1 year
Zone Amendment: <sup>1</sup>	
A. Minor - 2 parcels or less with Negative Declaration	30-90 days
B. Major - with Mitigated Negative Declaration	45-120 days
C. Significant - with Environmental Impact Report	90 days-1 year
General Plan Amendments:	
A. Minor - 2 parcels or less with Mitigated Negative Declaration	90-250 days
B. Major - with Environmental Impact Report	120 days-1 year
C. Significant - with Environmental Impact Report and Annexation	150 days-1 year
Specific Plan: <sup>1</sup>	
A. Minor - with Environmental Impact Report	120 days-1 year
B. Major - with Environmental Impact Report	150 days-1 year

Source: Castañeda Associates

<sup>1</sup> The Planning Commission considers these applications in an advisory capacity; the City Council is responsible for all final action on these matters. An additional 30-40 days must be added to accommodate City Council review.

are under-served areas or income groups in the community for new construction or rehabilitation loans. The D/HCD indicates knowledge of this will assist the community in selecting and implementing responsive housing programs such as mortgage revenue bonding, a mortgage credit certificate program, and targeted low-interest rehabilitation loans.

An inventory of current financing costs for a 30-year fixed loan is summarized below:

- Sonoma National Bank - 10% with 1.5 points
- San Francisco Federal Savings & Loan - 10.375% with 2 points
- Great Western Bank - 10.4% with 2 points
- Bank of America - 10.25% with 2.375 points

An affordability analysis is provided on Table R. One would need to earn an annual income of approximately \$39,792 in order to afford the median resale price of a home in Cloverdale. Approximately 38 percent of Cloverdale's population could afford the median resale priced home according to Table H.

### Price of Land

As of September 1990, there were 16 vacant parcels on the market for sale. The prices of these parcels ranged from \$120,000 for a parcel .3 acre in size to two parcels selling for \$250,000 (1.02 acres and 26.0 acres). Table S indicates the price of land.

### Cost of Construction

Information on construction costs is based upon building valuation of recent single family homes built on the City. The size, dollar value, and values per square foot are listed in Table T.

### Home Prices

Homeownership opportunities are principally available in the resale and new home markets. In mid-1990, the median resale price of home sales in Sonoma County was \$188,250 while in Cloverdale the comparable figure was \$138,600. Table U presents resale price data for Cloverdale and the remainder of Sonoma County.

With regard to new homes, there are at least three active developments in the Cloverdale area:

- Jefferson Springs
- Rancho de Amigos
- Oakbrook Estates

The Jefferson Springs development has the following price distribution:

TABLE R  
HOUSING AFFORDABILITY

	Term	<u>Interest Rate</u>		
		9.5%	10%	10.25%
Mortgage Payment Factor	15	.1277	.1315	.1334
	30	.1017	.1061	.1083
Annual Payment for \$110,880 <sup>1</sup> Mortgage	15	\$14,164	\$14,578	\$14,786
	30	\$11,274	\$11,762	\$12,008
Annual Payment for \$135,600 <sup>2</sup> Mortgage	15	\$17,322	\$17,828	\$18,083
	30	\$13,788	\$14,384	\$14,685
Payments over Mortgage Term, \$110,880	15	\$212,463	\$218,667	\$221,797
	30	\$338,230	\$352,862	\$360,242
Payments over Mortgage Term, \$135,600	15	\$259,831	\$267,418	\$271,245
	30	\$413,637	\$431,530	\$440,555
Annual Household Income Necessary to Obtain \$110,880 Mortgage (Assumes 34% PITI/Gross Income Ratio)	15	\$49,991	\$51,451	\$52,187
	30	\$39,792	\$41,513	\$42,381
Annual Household Income Necessary to Obtain \$135,600 Mortgage (Assumes 34% PITI/Gross Income Ratio)	15	\$61,137	\$62,922	\$63,822
	30	\$48,663	\$50,768	\$51,830

Source: STA Planning, Inc.

Notes: <sup>1</sup>80 percent mortgage of the median resale price 138,600 in Cloverdale.

<sup>2</sup>80 percent mortgage of the lowest sales price of home in Jefferson Springs, \$169,500.

**TABLE S**  
**CITY OF CLOVERDALE**  
**LAND PRICES**

SIZE (IN ACRES)	ASKING PRICE
14,500.0 sq. ft.	\$169,000
.30	\$120,000
.75	\$169,000
.90	\$144,950
1.02	\$250,000
1.15	\$179,000
1.22	\$165,000
2.70	\$165,000
2.74	\$189,000
3.65	\$199,950
4.40	\$180,000
6.00	\$215,000
6.89	\$160,000
7.00	\$170,000
26.00	\$250,000

Source: Casteñada & Associates

**TABLE T**  
**CITY OF CLOVERDALE**  
**CONSTRUCTION COSTS**

SIZE (SQ. FT.)	DOLLAR VALUE	PER SQUARE FOOT VALUE
1,200 sq. ft.	\$84,546	\$70.46
1,753 sq. ft.	\$118,867	\$67.81
1,900 sq. ft.	\$129,000	\$67.89

Source: Casteñada & Associates



TABLE U  
SONOMA COUNTY RESALE PRICES - 1990

SINGLE-FAMILY RESIDENCES				
AREA	JAN. 1990 ALL HOMES	JULY 1990 ALL HOMES	JAN. 1990 ALL SALES	JULY 1990 ALL SALES
Santa Rosa Areas:				
Northwest	\$179,000	\$179,125	29	38
Southeast	\$225,500	\$226,500	18	36
Southwest	\$150,000	\$154,475	9	10
Northeast	\$242,000	\$323,500	30	36
All Santa Rosa	\$186,750	\$189,500	86	120
Healdsburg	\$395,000 <sup>1</sup>	\$165,000	4	10
Cloverdale	\$155,000	\$138,600 <sup>1</sup>	5	1
Sebastopol	\$180,000	\$200,000 <sup>1</sup>	8	3
Sonoma	\$214,500	\$196,000	10	18
Petaluma Areas:				
East	\$216,000	\$197,500	23	16
West	\$255,000	\$222,750	13	8
Cotati-Rohnert Park	\$169,000	\$185,750	14	27
Windsor Area	\$220,000	\$170,000	11	13
Russian River	\$130,500	\$147,750	14	12
All Sonoma County	\$185,750	\$188,250	188	228
California Median	\$196,821			
Bay Area Median	\$226,997			
CONDOMINIUMS				
		JULY 1990	JANUARY 1990	
Santa Rosa		\$125,500	\$123,000	
Petaluma		\$180,250	\$156,475	
Cotati-Rohnert Park		\$120,000	\$112,950	
California Median		\$147,523 <sup>2</sup>		

Continued

TABLE U (Cont.)

## SONOMA COUNTY RESALE PRICES - 1990

SINGLE-FAMILY RESIDENCES				
AREA	JAN. 1990 ALL HOMES	JULY 1990 ALL HOMES	JAN. 1990 ALL SALES	JULY 1990 ALL SALES
COUNTRY PROPERTIES <sup>2</sup>				
AREA	JAN. 1990	JULY 1990	JAN. SALES	JULY SALES
Santa Rosa	\$350,000	\$334,000	13	12
Sonoma County	\$256,500	\$376,258	50	59

Source: John Favre, Prudential California Realty, Santa Rosa, 528-7643, based on figures from the Sonoma County Multiple Listing Service.

<sup>1</sup>Median based on small samples with one sale having the potential to skew figures.

<sup>2</sup>Country denotes homes outside the City limits.

●	Plan 1	\$169,500
●	Plan 2	\$185,900
●	Plan 3	\$197,900
●	Plan 4	\$209,000

The Rancho de Amigos development offers homes in the \$179,000 to \$199,000 price range. At this time, no data are available for the Oakbrook Estates.

Rental housing is an important part of Cloverdale stock. As noted earlier, there is one low-income rental development at risk of conversion to market rate housing. Among the major apartments in the City are:

- The Trees
- Foothill Apartments
- King's Valley
- Vineyard Manor
- Divine Apartments
- Cloverdale Garden Apartments

## FINDINGS

1. During the past decade, the City's housing stock has gradually increased from 1,656 to 2,109 units. Most of the gain was in single-family detached homes.
2. According to the 1980 Census, 63.1 percent of all households had lived in their dwellings for five years or less (renters and owners).
3. According to the 1980 Census, 2.42 percent of Cloverdale's housing units were considered overcrowded.
4. Three hundred twenty five housing units were constructed, meeting 46 percent of the 1985-1990 Housing Element objective.
5. One 22-unit affordable housing development was constructed during the planning period and another 34-unit affordable development was under construction as of September 1990.
6. No second units were constructed although a second unit ordinance was adopted in August of 1983.
7. A redevelopment project area was established in 1987.
8. Sixteen households in the City have been financially assisted under the provisions of the Section 8 rental assistance program.

9. Enactment of a Mobile Home Park Rent Regulation ordinance helped preserve affordable housing.
10. The City considered several alternative financing mechanisms to assist in the provision of affordable housing.
11. 1990 household income distribution ranges in Cloverdale from less than \$5,000 (5.7 percent) to \$100,000 plus (2.4 percent). The three largest single ranges are \$40,000-49,999 (10.4 percent), \$5,000-\$9,999 (12.7 percent), and \$10,000-14,999 (12.8 percent).
12. According to 1980 Census data, disabled households in Cloverdale totaled 316 persons (work disability), and 75 persons (public transportation disability).
13. According to recent data, one in five persons residing in Cloverdale are 65 years and older.
14. The four highest age ranges in the City for 1990 are: 45-54 (10.5 percent); 25-34 (14.9 percent); 35-44 (17.0 percent); and, 65 plus (19.4 percent).
15. Approximately seven percent of Cloverdale households are considered large (5 or more persons).
16. Thirty-six persons employed in the farming, forestry, and fishing industries who resided in Cloverdale according to the 1980 Census.
17. There is one emergency shelter in Cloverdale which has five beds.
18. Most indicators show that the City's housing stock is essentially adequate. Approximately 16 percent of the City's 1986 housing stock is considered deteriorating or dilapidated.
19. Over the past decade, the City's vacancy rate has increased from 3.93 - 7.15 percent.
20. According to ABAG data, there are 263 (44 percent) lower income Cloverdale households paying more than they can afford for housing expenses.
21. ABAG projects that a total of 783 units (227 very low income, 125 low, 172 moderate, and 259 above moderate) will need to be built within Cloverdale over the 1991-1996 period.
22. Vacant and under-utilized sites in Cloverdale have a capacity for approximately 2,000 dwelling units.



23. Potential constraints to development of future housing include water, sewer, streets, and storm drains.
24. The King's Valley Apartments are considered a development "at risk" of conversion.
25. During the past fiscal year (7-1-89 to 6-30-90), zero housing discrimination cases have originated in Cloverdale.
26. Governmental constraints affecting the maintenance, improvement, and development of housing include: land use controls; building codes/enforcement; site improvements; fees and other extractions; and, local processing and permit procedures.
27. Non-governmental constraints include: availability of financing, price of land, and cost of construction.
28. In 1990 the median resale price for homes in Cloverdale was \$138,600. Homes with this price are affordable to approximately 38 percent of the City's residents.

# TRANSPORTATION AND CIRCULATION

## INTRODUCTION

The transportation and circulation section is a summary of a report provided by TJKM Transportation Consultants. The report summarizes existing traffic conditions, future circulation need, and land use issues. The complete report is included in Appendix G.

## VEHICULAR TRANSPORTATION

### Circulation System

The existing circulation system in the City of Cloverdale has been influenced by several features. These features include mountainous terrain, the Russian River which traverses the area from north to south, and the Northwestern Pacific Railroad line which parallels the Russian River.

The existing circulation system within the study area is dominated by U.S. 101 which currently carries both local and regional traffic through the center of Cloverdale. A grid system serves the central core area of the City. Beyond the downtown core and adjoining residential area, there are intermittent residential streets intersecting with U.S. 101 to the north and south.

### U.S. Highway 101

Cloverdale Boulevard (U.S. 101) provides regional access to the City of Cloverdale. It carries most north-south local traffic as well as regional through traffic. It is a two-lane rural highway north of the City limits; two lanes with a two-way left-turn lane between the northern City limits and Third Street; four lanes between Third Street and Railroad Avenue; two lanes with a two-way left-turn lane between Railroad Avenue and the southern City limits; and a four-lane freeway south of the City limits.

### State Route 128

State Route 128 (S.R. 128) is a two-lane rural highway which connects U.S. 101 with the Mendocino coast area. The U.S. 101/S.R. 128 connection, north of the Cloverdale City limits, is an unsignalized intersection with stop sign control on the S.R. 128 approach.

### Major Streets

First Street provides major east-west access within the City limits. It also provides access to the Russian River and eastern foothill area. The intersection of First Street/Cloverdale

Boulevard is the only signalized intersection in the City. It operates under a two-phase operation.

### **Minor Streets**

Roads which access the western foothill area include Cherry Creek Road and Hot Springs Road. These roads are rural in nature and intersect with Cloverdale Boulevard, south of the downtown area. Elbridge Avenue intersects Cloverdale Boulevard south of Hot Springs Road and serves as the access to the Rancho De Amigos residential subdivision. Other minor collector streets in the study area include Washington Street, Jefferson Street and Franklin Street. These streets provide north-south access immediately west of the downtown area. The intersection of Franklin Street and Cloverdale Boulevard should be considered a critical intersection in the City because it provides access to the residential neighborhoods, west of downtown. This intersection is unsignalized with stop sign control on the Franklin Street approach.

### **Existing Traffic Volumes**

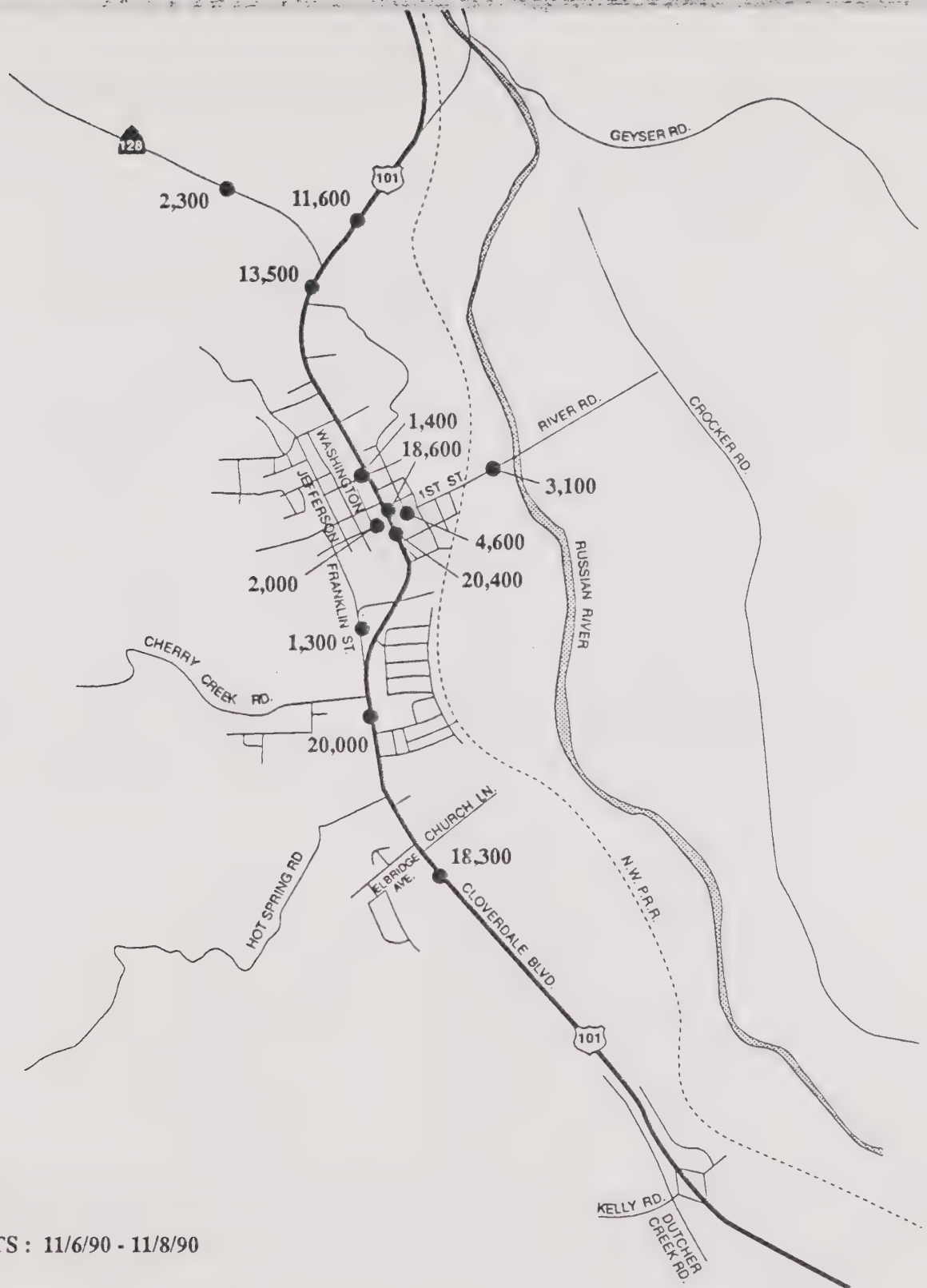
Existing traffic volumes on U.S. 101 were available from Caltrans 1988 Traffic Volumes and from previous traffic studies which are noted in Appendix G. To supplement these counts, traffic volumes were counted by machine at key locations in the City. These counts were taken between November 6, 1990 and November 8, 1990. The existing traffic volumes are shown in Exhibit 6. Traffic on Cloverdale Boulevard varies from 11,600 vehicles per day, north of State Route 128, to 20,400 vehicles per day south of First Street. The directional peak hour traffic volumes are shown in Exhibit 7.

### **Existing Operating Conditions**

The Level of Service (LOS) classification system ranks street and highway operations based on the amount of traffic and traffic conditions. Briefly, the level of service ranking system is a scale with a range of LOS A through LOS F. LOS A represents free flow conditions and LOS F represents jammed conditions. A description of these designations is provided in Appendix G.

The intersection of Cloverdale Boulevard and First Street acts as a major bottleneck in the U.S. 101 corridor. On holiday weekends, major delay and LOS F conditions are experienced in the City at this location. During normal weekday operations, the signal operates under a more acceptable level of service. The majority of other intersections in the City operate at acceptable levels of service during the weekday peak hours.

Peak hour turning movements were also taken at the intersections of Cloverdale Boulevard/First Street and U.S. 101/S.R. 128. Volume-to-capacity (V/C) analyses were performed using these counts to evaluate existing conditions and to determine existing levels of service.



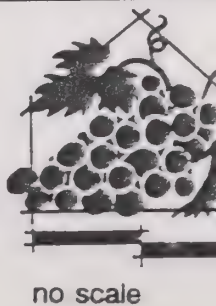
DATE OF COUNTS : 11/6/90 - 11/8/90

Source: TJKM

# EXISTING TRAFFIC VOLUMES

GENERAL PLAN  
City of Cloverdale

6



no scale







**LEGEND:**

XX = A.M. PEAK HOUR

(XX) = P.M. PEAK HOUR

DATE OF COUNTS : 11/6/90 - 11/8/90

# EXISTING PEAK HOUR TRAFFIC

## GENERAL PLAN

City of Cloverdale



no scale



These two intersections were analyzed using the critical lane method which involves consideration of "critical" (or high volume) conflicting movements. A description of this intersection capacity analysis method is included in Appendix G. The U.S. 101/S.R. 128 intersection was also analyzed using the unsignalized intersection capacity method described in the 1985 Highway Capacity Manual.

Currently, the Cloverdale Boulevard/First Street intersection is operating with a V/C ratio of 0.68 and a LOS B, indicating slight delay during the weekday p.m. peak hour. As a whole, the U.S. 101/S.R. 128 intersection is operating with a LOS A during the weekday p.m. peak hour. However, based on the unsignalized level of service analysis, the eastbound left turn from S.R. 128 to northbound U.S. 101 is operating with a LOS D, indicating long traffic delays during the weekday p.m. peak hour. The intersection calculation sheets which include the p.m. peak hour turning movements are shown in Appendix G.

The operations at the intersection of Cloverdale Boulevard and First Street could be improved by prohibiting left-turn movements from Cloverdale Boulevard during peak hours. This prohibition would improve the capacity of the Cloverdale Boulevard approaches to the intersection. Currently, these approaches do not have exclusive left-turn lanes.

The southbound Franklin Street approach at Cloverdale Boulevard is aligned in a non-standard manner which requires a merge movement for the southbound Franklin Avenue approach. The City should consider realigning Franklin Avenue to create a standard right angle approach to Cloverdale Boulevard.

### Planned Circulation Improvements

The State Transportation Improvement Plan (STIP) includes a freeway bypass along the east side of Cloverdale. The bypass will be developed initially as a four-lane freeway with the provision for future expansion to six lanes. A southern interchange would be constructed by 1991, and the full bypass with two additional interchanges is to be constructed by 1994. This would relieve a projected 50 percent of the existing traffic including the majority of the truck traffic on Cloverdale Boulevard. The preferred bypass alignment with interchange locations as identified by Caltrans plans is shown in Exhibit 8.

The City General Plan shows Foothill Boulevard as an arterial to be extended south to Kelly Road. The City owns the Foothill Boulevard right-of-way, and intends to require funding participation by benefiting new developments. Foothill Boulevard would function as a minor arterial, having two travel lanes with turn lanes at intersections, and Class II bicycle lanes. Class II bikeways are adjacent to but separated from motor vehicles and/or pedestrian traffic-ways. Within the bike lane a cyclist may be preempted by turning or parked vehicles. The proposed Foothill Boulevard extension and other proposed extensions which were identified in the current General Plan are shown in Exhibit 9.





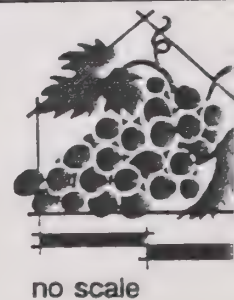


Source: TJKM

# U.S. HIGHWAY 101 BYPASS ALIGNMENT

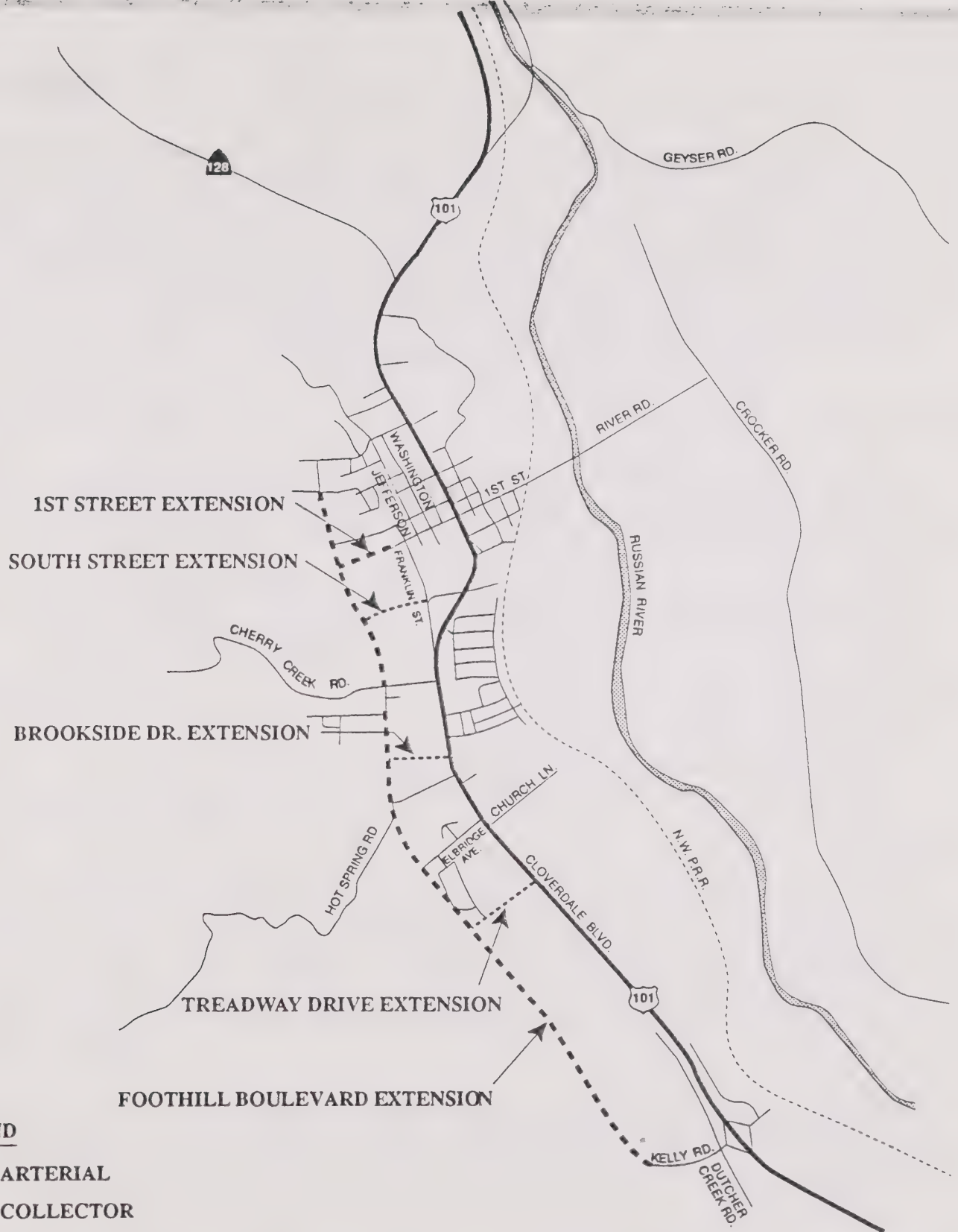
## GENERAL PLAN City of Cloverdale

8



no scale





Source: TJKM

# PROPOSED 1978 GENERAL PLAN EXTENSIONS

**GENERAL PLAN**  
City of Cloverdale

9







## Downtown Plan

A downtown redevelopment plan has been completed by Michael Black and Associates for the City of Cloverdale. This plan recommends both land use and circulation modifications to the downtown area bounded by Fourth Street on the north, Lake Street on the south, Main Street on the east, and Commercial Street on the west. Under this plan, Broad Street would be closed and the character of Cloverdale Boulevard would be significantly changed. Diagonal parking would be added and a traffic circle would be installed on Cloverdale Boulevard between First Street and Second Street. These modifications would significantly reduce the traffic carrying capacity of Cloverdale Boulevard near downtown.

## Future Traffic Projections

Available future traffic projections were obtained from the Cloverdale Redevelopment Project Draft EIR, April 1987. The projected traffic volumes in the study area are shown in Exhibit 10. These volumes are based on completion of the U.S. 101 bypass.

With the development of a new land use plan for the City of Cloverdale, new future traffic projections will be developed. These projections will incorporate the impacts of the freeway bypass, the downtown plan, and addition of new road extensions.

## Circulation Issues

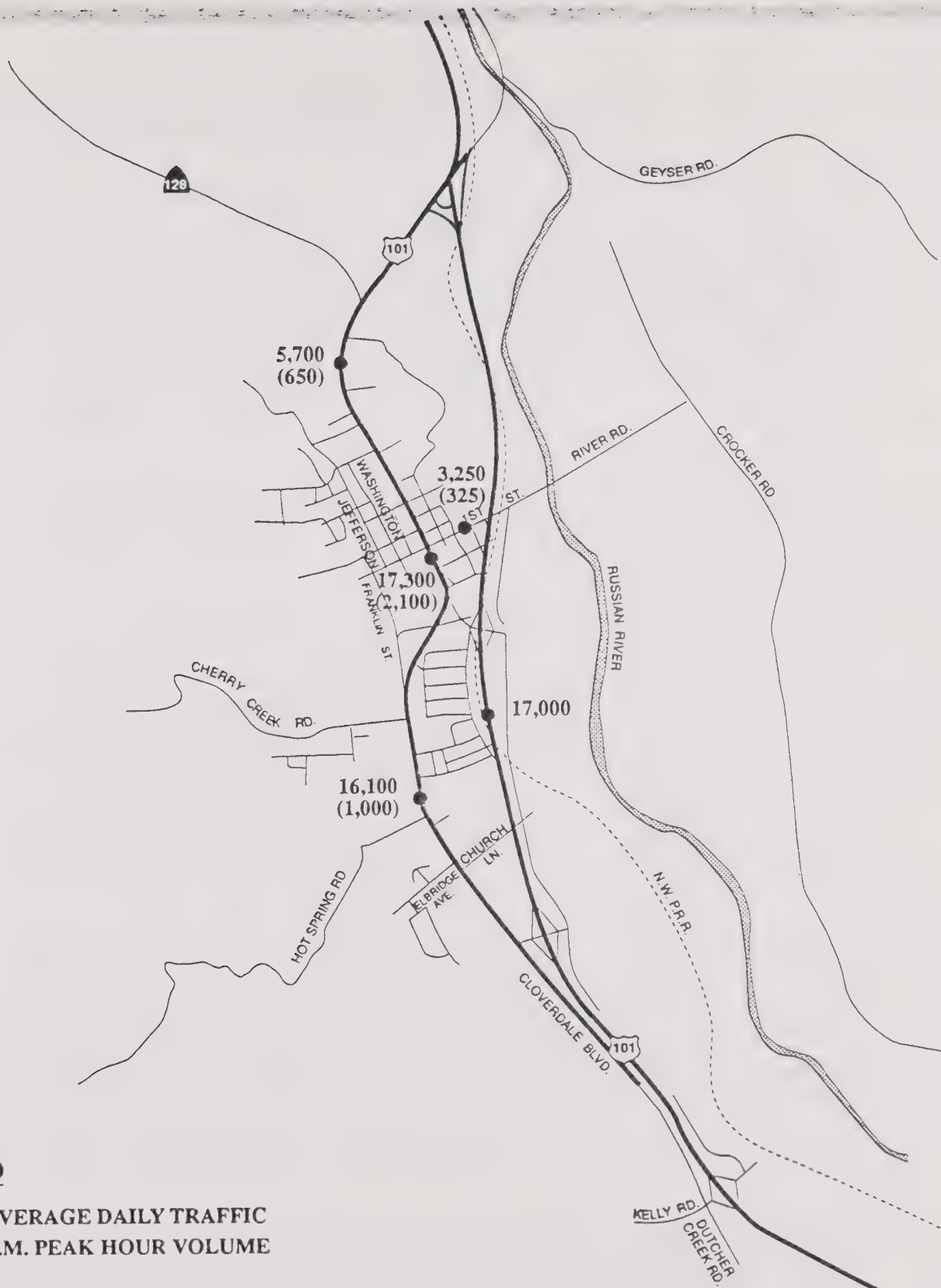
A number of critical circulation issues should be reviewed and resolved as part of the General Plan. These issues are related to the freeway bypass, to the downtown plan and to the existing circulation system as well.

Completion of the U.S. 101 Bypass will have a major impact on circulation in the City. Although it will eliminate the majority of through traffic in the City, it will also change the circulation pattern of most local traffic. With the bypass, the major travel demand of local traffic will be for east-west routes rather than north-south. Local traffic which now travels north or south on Cloverdale Boulevard will shift to east-west streets to access the new interchanges. Streets which are now classified as collectors will operate as arterials with the addition of the bypass.

It should be noted that the proposed interchange alignments as proposed by Caltrans may be a low standard design which may not accommodate the capacity needs of the City of Cloverdale. The connections to Cloverdale Boulevard are also very low standard designs with potential operational problems.

The proposed circulation system in the downtown plan would have a major impact on the circulation pattern of local traffic. The downtown plan would reduce the through traffic capacity of Cloverdale Boulevard and essentially cut off a continuous arterial through the center of the City. With the existing circulation system, the downtown plan, and the freeway





### LEGEND

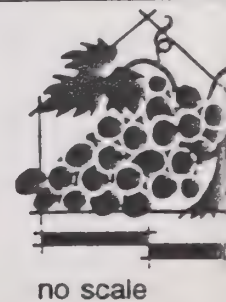
X,XXX = AVERAGE DAILY TRAFFIC  
(XXX) = P.M. PEAK HOUR VOLUME

Source: TJKM

# PROJECTED FUTURE TRAFFIC VOLUMES

GENERAL PLAN  
City of Cloverdale

10



no scale





bypass, all local traffic originating north of the downtown area would be forced to travel through the downtown area or travel north to the northern interchange.

New residential developments and proposed developments along the Cloverdale Boulevard corridor may create a need for traffic signals on Cloverdale Boulevard. The need for additional traffic controls should be continually evaluated with each subdivision proposal. A traffic mitigation fee could be used for future traffic improvements in the City. Traffic mitigation improvements are often needed under cumulative traffic conditions rather than with the addition of only one project. This fee can also be imposed on commercial developments in order to upgrade the capacity of the proposed interchanges.

### Circulation Improvements

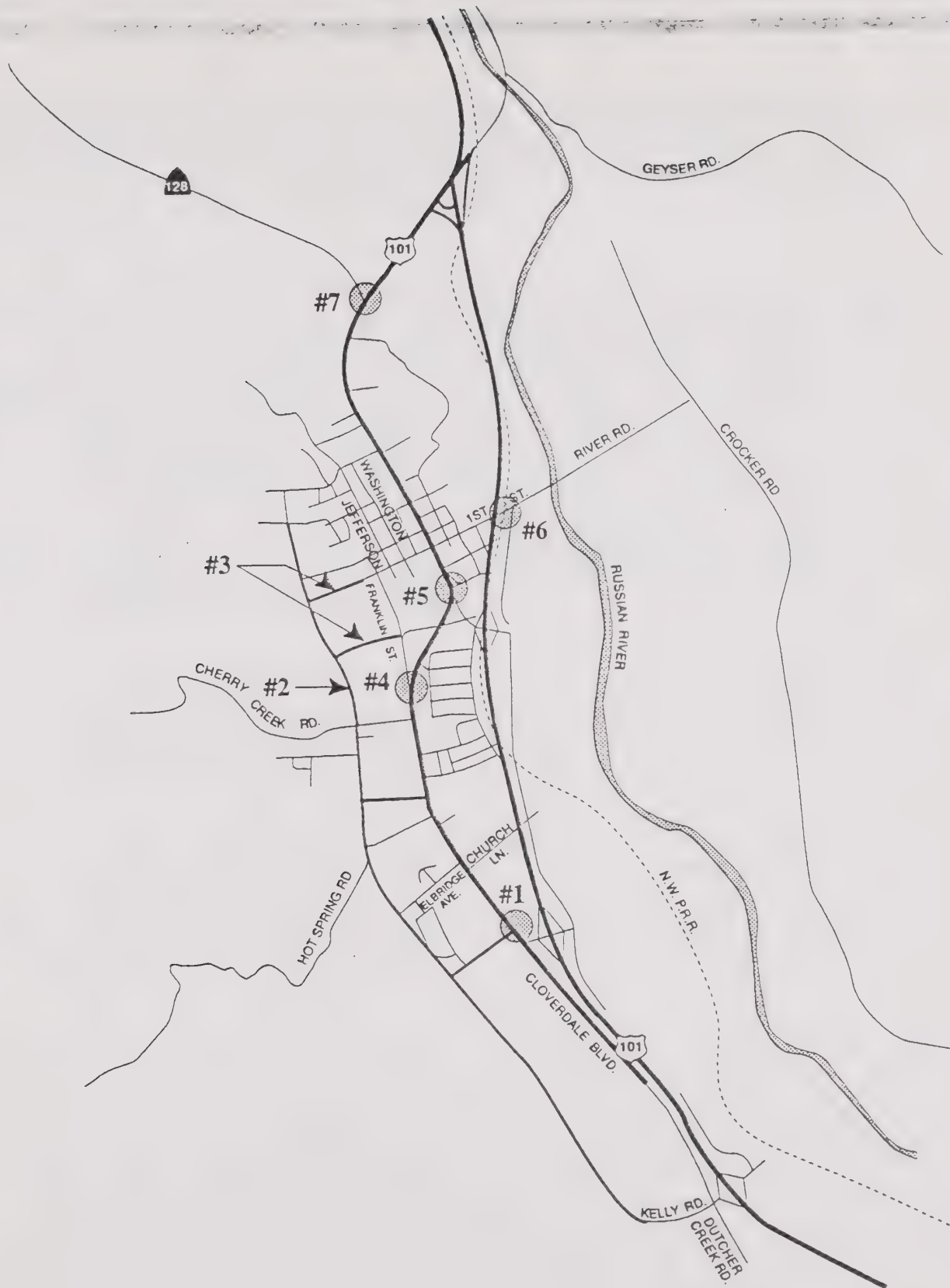
A number of other specific circulation issues are discussed below. The location of these circulation issues are shown in Exhibit 11. The numbering system of these issues does not indicate their importance.

**Circulation Issue No. 1:** Alignment of the new southern interchange with U.S. 101 would result in undesirable operating conditions. This alignment creates two critical intersections, Cloverdale Boulevard/Treadway Drive and Cloverdale Boulevard/Southern Interchange Connection, at a distance less than 400 feet apart. A number of mitigation measures should be explored. One alternative would be to realign the Treadway Drive connection with Cloverdale Boulevard farther away from the interchange connection. Another alternative would be to realign the Cloverdale Boulevard/Southern Interchange Connection so that the frontage road segment to the south would become the minor street of a "T" intersection. Under this alternative, the southbound Cloverdale Boulevard to southern interchange movement would be continuous without requiring turning movements.

**Circulation Issue No. 2:** The Foothill Boulevard extension would become a higher speed bypass to Cloverdale Boulevard. It would be appropriate to restrict any residential development from fronting on this new roadway. All development along this corridor should be designed to back-up to the road to avoid any future conflict between traffic needs and the surrounding neighborhood. It should be noted that this extension would most likely carry minor traffic volumes in the future. The majority of development in the City would lie between this extension and U.S. 101. Therefore, any north-south travel on Foothill Boulevard would involve back-tracking from most residential areas to the desired direction of travel.

**Circulation Issue No. 3:** The South Street and First Street extensions which were included in the previous General Plan should be included in the updated General Plan. These extensions, especially the South Street extension could become important links in the local network. The extensions provide the most direct routes from existing residential areas to the central interchange with U.S. 101. Consideration should be given to classifying South Street as an arterial in the updated General Plan.



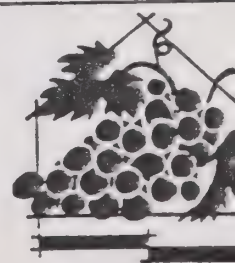
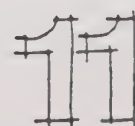


Source: TJKM

# CIRCULATION ISSUES

## GENERAL PLAN

### City of Cloverdale



no scale





**Circulation Issue No. 4:** As described in the "Existing Conditions" section, the southbound Franklin Street approach at Cloverdale Boulevard is aligned in a non-standard manner which requires a merge movement for the southbound Franklin Avenue approach. The City should consider realigning Franklin Avenue to create a standard right angle approach to Cloverdale Boulevard.

**Circulation Issue No. 5:** Under future traffic conditions, the intersection of Cloverdale Boulevard and the central interchange connection could become the most critical intersection in the City. The majority of existing residential areas in the City would use this interchange to access U.S. 101. Also, the majority of U.S. 101 through traffic which stops in Cloverdale would use the central interchange for access. The intersection with Cloverdale Boulevard as shown in the plan by Caltrans would create very undesirable operating conditions because of the merge alignment which would be created. Because of the projected traffic demand at this location, this intersection should be the highest capacity intersection in the City. In addition, the eastern design variation identified by Caltrans would be more desirable than the preferred plan because it provides more stacking distance between the interchange and Cloverdale Boulevard.

**Circulation Issue No. 6:** The proposed intersection of First Street and the eastern frontage road could become a critical intersection. As shown in the plan by Caltrans, the proposed alignment may create undesirable sight distances from the frontage road approach. Also, the close proximity to the railroad right-of-way may create operational problems. This intersection should be located farther to the east if possible.

**Circulation Issue No. 7:** Through traffic travelling from S.R. 128 to U.S. 101 and the reverse should be directed to use the northern interchange. Because the downtown plan would decrease the through traffic carrying capacity of Cloverdale Boulevard, it would be important to restrict any future truck traffic on City streets. Because of the potential increase in left turn traffic from S.R. 128 with the bypass, this location may warrant traffic signals in the future.

## LAND USE ISSUES

The most critical portion of the Cloverdale circulation network which would be impacted by any changes in the land use would be the streets and intersections near the proposed freeway interchanges. The most appropriate land uses near the interchanges include highway commercial and industrial uses. Commercial uses tend to generate a significant amount of traffic which generally require more capacity than traffic generated by industrial uses. If the City cannot modify the planned lane configurations at the interchanges, the land use element should be designed to accommodate the proposed interchange configurations.

The land use proposed as part of the downtown plan could have an impact on the circulation system. In order to determine the impact, land use details should be known. For instance, if the majority of proposed uses are geared to serve the surrounding community,

the plan would have a minor impact on the circulation system. If the uses are planned to attract visitors and/or employees from outside of the area, then it may have a significant impact on the circulation system. Any proposed land use which is designed to attract users from outside of Cloverdale would have a significant impact on the circulation system. These type of uses should be limited and located where there is available traffic capacity.

## TRANSIT

Bus service along Cloverdale Boulevard is provided by Sonoma County Transit. Route 60 runs between Cloverdale City Hall and the Second Street Transit Mall in Santa Rosa, with intermediate stops in Asti, Geyserville, Healdsburg, Windsor and northern Santa Rosa. Currently, seven buses per weekday run along this route, two during the morning peak period and two during the p.m. peak period. Saturday service is also offered. Adult fares are \$.80 for local trips and \$2.00 for Cloverdale-Santa Rosa trips.

Sonoma County Transit reported a 25 percent rise in patronage on Route 60 between 1988 and 1989. Over a third of the patrons are students and most patrons use transit to reach destinations in Santa Rosa. Sonoma County Transit plans to introduce Sunday and evening service within the next few years. Express service to Santa Rosa is planned for 1994.

Potential transit improvements include more frequent bus service along Route 60 from Cloverdale south and the extension of service to northern Cloverdale. The present supply of transit service is probably adequate for a community of Cloverdale's size. Future growth could require new routes to be established to serve new residential areas and future park-and-ride lots in Cloverdale.

Cloverdale Transit offers minibus service to a small number of locations in the city during the peak periods. Demand response runs are made throughout the rest of the day. The system operates between 8:00 a.m. and 5:00 p.m., Mondays through Fridays.

Currently, Sonoma County has expressed interest in purchasing the Northwestern Pacific Railroad right-of-way located just west of the Russian River. This right-of-way could provide a vital link between Cloverdale and other Sonoma County communities. Plans calling for either a light rail line or busway to be built along this corridor throughout Sonoma County, as part of a countywide measure were defeated in the November, 1990 election.

## BICYCLE

Currently, there are few facilities for bicycle traffic in the City of Cloverdale. Vehicular congestion along U.S. 101, the most direct route through Cloverdale, severely limits bicycle access. In addition, bicycle safety is a major concern among riders in the area.

Bicycle lanes should be developed on all major arterials in Cloverdale where the right-of-way is available for purchase. A citywide plan for integrating bicycle facilities with regional



transit stops should be encouraged, where right-of-way and funding exist. All major new development should contain provisions for safe, secure bicycle parking.

## PEDESTRIAN

Presently, not all streets are equipped with sidewalks for pedestrian traffic. Most sidewalks are either near or along U.S. 101, in central Cloverdale. While there are a number of crosswalks in the downtown area, few of them cross U.S. 101.

Sidewalks should be constructed on all downtown city streets, particularly those providing access to the downtown area, schools, commercial establishments and transit stops.

It is especially important to plan for pedestrians in new developments. Future planning should not only be concerned with the provision of sidewalks in new areas, but also with encouraging pedestrian trips through creative site design. For example, the integration of neighborhood retail services and schools with residential subdivisions can help minimize the need for motorized trips.

## PARA TRANSIT

Para Transit services are personalized, flexible, client-oriented transportation by a variety of means. These services include pre-arranged ride-sharing, demand-responsive transit, and ownership/use schemes.

Currently, few para transit alternatives are available to individuals commuting from Cloverdale to other cities. A number of residents commute to employment centers along U.S. 101. Only informal carpooling/vanpooling is known to exist. No commuter message boards or park and ride lots have been established in Cloverdale.

Ridesharing should be actively promoted in the Cloverdale area. The City should take an active role in publicizing rideshare options for residents commuting to points outside of the immediate vicinity. Rides for Bay Area Commuters, a non-profit agency, can assist individuals and groups interested in forming shared-ride arrangements.

Further growth in and around Cloverdale could eventually justify requesting Caltrans to build a park-n-ride lot at the central and southern interchanges of the new Highway 101 freeway bypass to the east of downtown. Also, future transit could serve park-and-ride lots as it does along U.S. 101 in Marin County.

## FINDINGS

1. The eastbound left turn from S.R. 128 to northbound 101 is operating at a Level of Service D during the weekday p.m. peak hour indicating long traffic delays.



2. The intersection of Cloverdale Boulevard (U.S. 101) and First Street is operating at a Level of Service B during the weekday p.m. peak hour indicating slight traffic delays.
3. The intersection of Cloverdale Boulevard (U.S. 101) and First Street act as a major bottleneck in the U.S. 101 corridor on weekend peaks. The intersection operates at LOS F during holiday weekend peaks.
4. The Downtown Plan and proposed Highway 101 bypass will cause major alterations to existing traffic patterns.
5. Traffic after proposed plans are implemented can be improved by implementing traffic improvements listed in this analysis.
6. Sidewalks should be constructed to accommodate pedestrian traffic downtown and for new developments.
7. Bicycle lanes and parking should be developed to facilitate bicycle traffic.
8. Ridesharing and other alternative forms of transit should be encouraged.

## PUBLIC SERVICES AND UTILITIES

### EXISTING CONDITIONS

#### Health Care Services

Emergency ambulance services for the City of Cloverdale are provided by the Cloverdale Hospital District located at 213 Main Street. The Cloverdale Hospital District currently serves the entire area within the City limits and the Sphere of Influence. Emergency ambulance service is supplied to the City and surrounding area. Both the building and ambulance service are currently 100 percent utilized. The nearest full service hospital is the Healdsburg Hospital in Healdsburg, California. Healdsburg Hospital is approximately 20 minutes away by ambulance.

Current services of Cloverdale Hospital District are operating at full capacity. Future growth will require the expansion of these facilities. Plans as approved by the City include construction of 1,460 square feet of office space, garage, and staff quarters adjacent to the existing building. There are currently no plans to proceed with construction of the expansion project.

Long-range goals call for a full service hospital to be located within the City limits. Also under consideration is a separate emergency clinic within the City limits. Needs for a second ambulance and associated staff are also anticipated.

Levels of service are determined by the City's population base. If population increases at a rate lower than expected, price increases will be likely.

#### Police

The City of Cloverdale Police Department provides municipal law enforcement and emergency dispatch of police, fire, and medical services. The Police Department building is currently located at 112 Broad Street. The building is currently operating beyond design capacity. Two storage facilities have been rented to handle the overflow of property, evidence, and supplies. The Department is currently staffed by ten sworn officers and dispatchers.

The Department estimates that projected growth will create the need for a new police facility ten times the square footage of current facilities. Staffing will also need to be increased. Current calls for service have risen 36 percent above the previous year, while the City has the same number of officers as ten years ago. Staffing levels should exist at a level of two officers per thousand population. Additionally, there is a need for increased clerical support. Increased reports of abuse and other crime requiring specialized training and investigative techniques are creating the need for investigative personnel.

Methods being investigated for budgeting revenue include developer fees, general obligation bonds, or redevelopment money.

## Fire

Fire services are provided by the City of Cloverdale Fire Department. The station is located at 116 Broad Street. Services provided include first response to medical emergencies and hazardous materials incidents, fire prevention services (inspections plan reviews, public education), fire suppression, rescue, maintenance of equipment and facilities, and general public assistance. The Department is contracted by Sonoma County to provide medical, rescue, and fire suppression services to a 155 square mile area surrounding Cloverdale. The service area is indicated on Exhibit 12.

Amenities include a three-bay facility capable of housing four fire engines and a staff vehicle. The station is staffed by one on-duty firefighter in a 24-hour shift and an on-duty fire chief on a 40-hour weekly schedule. Staff is also supplemented by 15 volunteer firefighters. Staffing levels should be maintained at a minimum level of two firefighters per one thousand population.

The station lacks space to house additional on-duty staff. Fire protection delivery is nearing capacity. There is no plan to expand facilities at this time.

The Cloverdale Fire Department is predominantly a volunteer organization and is unable to staff existing equipment with personnel Monday through Friday. Aging fire apparatus does not meet current and future needs. Fire department response time will increase due to growth and added population will increase demands for service. A master plan for fire protection will be needed.

Other concerns include: the capability of the current municipal water delivery system to maintain adequate quantity and pressure needed for fire protection in all areas; federal and state laws pertaining to training, staffing, equipment, and safety; building fire protection into all new residential and commercial developments; urban/wildland interface areas; industrial areas in the southern part of the study area; and the need to address increases in hazardous materials and household hazardous waste.

## Schools

The Cloverdale Unified School District provides elementary and secondary and school services to the study area. The School District headquarters are currently located at 97 School Street. The District operates four school facilities. Jefferson Elementary School is located at 129 South Washington Street. Cloverdale High School is located at 509 North Cloverdale Boulevard. The school District also operates the JEH Continuation High School located at 322 North Washington. Current enrollment for the schools is listed in Table V below.



Source: Sonoma County Planning Department

FIRE DEPARTMENT SERVICE AREA

GENERAL PLAN  
City of Cloverdale

12







**TABLE V**  
**CURRENT SCHOOL CAPACITIES**

SCHOOL	CURRENT ENROLLMENT
Jefferson School	468
Washington School	533
Cloverdale High School	274
JEH Continuation High School	17

Source: Cloverdale Unified School District

The school system currently is over its designed student capacity. The School District rented eight relocatable classrooms for the 1989-1990 school year to accommodate the extra students. The volume of students is expected to increase as growth continues in the study area. The School District estimates 58.7 new students for every 100 homes of new development.

To handle the expected increase in number of students the School District has purchased five relocatable classrooms for Jefferson Elementary School and one relocatable for Cloverdale High School. The increased enrollment will also create a need for more staff.

Financing for the projected expansion of school facilities and staff will come from developer fees. Beginning in September 1989 the School District has assessed \$1.58 per square foot of residential development and \$0.26 per square foot of commercial development.

### Library

The Sonoma County Library serves the study area with a regional branch library at 401 North Cloverdale Avenue in the City of Cloverdale.

The County system has one main branch, eight regional branches, and four rural stations. The Cloverdale Branch encompasses 7,200 square feet and contains 21,000 volumes. The County system has an exchange program that gives residents access to any book in the County system. There are no current plans for expansion.

The library provides 58 hours of service per week. The Library is staffed with the equivalent of one and a half full-time librarians and one and a half full-time circulation technicians. A part-time shelver augments the staff.

## Public Works

### Sewer

The City of Cloverdale Public Works Department provides sewer service to portions of the study area. Sewer service is provided only within the City limits. Areas in the south and southwest portions of the City do not have full sewer services. Service is provided by a waste water treatment plant located at 71½ Clark Avenue. Design capacity of the plant is 4.5 million gallons per day (mgd). Operation is currently 75 percent of capacity.

Improvements to the treatment plant mandated by the North Coast Regional Water Quality Control Board (NCRWQCB) and National Pollutant Discharge Emission System (NPDES) are underway and scheduled for completion by November 1990. In addition to the upgrades which will meet discharge requirements mandated by NCRWQCB, current rates of growth will create the need for the expansion of the wastewater treatment plant.

### Water

The project area is served by a City of Cloverdale Public Works Department water plant located at 590 East First Street. The plant has a capacity of 3.2 mgd. Operation is currently at 66 percent of capacity (1.96 mgd). Currently, 1,790 water service connections are served by the plant.

The water plant is not scheduled for expansion within the next ten years. Transmission lines will be upgraded during Highway 101 bypass construction. Other transmission mains will be added to the system on the west side as developments occur to improve supply to Furber reservoir. Highway 101 construction will cause some crossings to be constructed for future use.

Alternative water sources are being explored at this time. A storage reservoir will be added as annexations and developments create demand. Annexations above 350 feet in elevation will require a reservoir with an elevation of 468 feet.

### Drainage

The City of Cloverdale Department of Public Works maintains drainage facilities in the study area. The main existing drainage facility serving the downtown area is a concrete box culvert. The box commences approximately 200 feet west of the intersection of Cloverdale Boulevard and Fourth Street and continues southeast and south, alternating between ditch, concrete box, and concrete and pipe, before outletting in an existing drainage ditch approximately 250 feet south of Railroad Avenue.

A second drainage structure commences near the intersection of Las Colinas Drive and First Street. This drain runs south and east and empties into the main structure at the easterly

terminus of South Street. A third system commences at the west side of Cloverdale Boulevard at the intersection of Healdsburg Avenue. This system flows eastward to an outlet crossing approximately 200 feet east of the intersection of Blair Street and Clark Avenue.

Many existing drainage facilities in the City are at or above capacity. As growth continues, improvements to the system will be required.

## **Roads**

The City of Cloverdale Department of Public Works maintains the surface streets in the study area. CalTrans maintains U.S. 101 through the City. There are 16 miles of roads within the City. These roads are in poor condition. Currently, only general maintenance and pothole patching is performed. More extensive improvements to roads and sidewalks have been achieved in certain areas of the City through the use of community block grants.

Expansion of the road system will occur within the next ten years. It is anticipated that all future construction will be accomplished by developers as they are allowed to develop. Construction will place no additional burden on the City Public Works Department. Long-term maintenance of any additional roads would be the responsibility of Public Works. Additional maintenance burden from new roads is not anticipated until 15 to 20 years after construction.

## **Gas and Electricity**

Pacific Gas and Electric Company (PG&E) provides gas and electric service to Cloverdale. The existing substation is located east of Tarman Track. The current growth will require an expansion of the distribution system. No additional staff members will be needed. There are plans to install a new substation in conjunction with the Highway 101 Bypass.

## **Telephone**

Pacific Bell provides telephone service to the City of Cloverdale. All residential and commercial locations, their sphere of influence, their capacity, and the level at which they are presently operating is proprietary information. As growth occurs in the City, facilities and technology will be expanded to coincide with requirements. Expansion of services will not require additional staff.

## **Solid Waste**

Cloverdale Disposal, Inc. provides solid waste services for the City of Cloverdale and Sonoma County. Facilities are located outside the City limits in Cotati, California. Services include curbside pickup of garbage, bins, and debris boxes. There are no current plans for expansion and no expansion needs are anticipated as a result of the City's projected growth.



## FINDINGS

1. Health care services are currently at capacity and will need to be expanded to accommodate future growth.
2. Fire protection service is currently inadequate and will need to be expanded to meet future growth. Expansion should include hiring of additional full-time staff and the purchase of additional equipment.
3. Staffing and facilities for the City of Cloverdale Police Department will require expansion to adequately service growth.
4. School enrollments are above facility capacity and additional sites, classrooms, and staff will be needed.
5. Current growth rates will create a need for expansion of the wastewater treatment plant and the addition of at least one plant staff person.
6. Sewer service is provided only within the City limits. Areas south and southeast of the City do not have full sewer services.
7. In addition to the planned extension of transmission lines from the water plant to the main reservoir, annexations above 350 feet will require a new reservoir with Zone 2 elevation of 468 feet.
8. Drainage facilities in the study area are at or above capacity, and improvements to the system will be required.
9. The road system is in poor condition and requires a more extensive maintenance program.
10. Current growth rates will require the expansion of gas and electric distribution systems.
11. Telephone service will be expanded as growth occurs. Pacific Bell should be contacted regarding their requirements early in the planning process.
12. Solid waste services will not require expansion to accommodate growth.

# NOISE

## INTRODUCTION

The information presented here will become a guideline for the development of land use policies to achieve compatible land uses and provide baseline levels and noise source identification for local noise ordinance enforcement.

### Noise Definitions

Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud; and 20 dBA higher four times as loud; and so forth. Everyday sounds normally range from 30 dB (very quiet) to 100 dB (very loud). Examples of various sound levels in different environments are shown in Table W.

Noise has been defined as unwanted sound, and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. These criteria are based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

HEARING LOSS is not a concern in community noise problems of this type. The potential for noise-induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud to cause hearing loss.

TABLE W

## TYPICAL A-WEIGHTED SOUND LEVELS

(Sound Levels and Loudness of Illustrative Noises in Indoor and Outdoor Environments)

dB(A)	OVERALL LEVEL		LOUDNESS	
	Sound Pressure Level Approx. 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	Human Judgement of Different Sounds Levels
130	Uncomfortably Loud	Military Jet Aircraft Take-Off With After-Burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 times as loud
120		Turbo-Fan Aircraft @ Take-Off Power @ 200 Ft. (90)	Riveting Machine (110) Rock-n-Roll Band (108-114)	110 dB(A) 16 times as loud
110				
100	Very Loud	Jet Flyover @ 1000 Ft. (103) Boeing 707, DC-8 @ 6080 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)		100 dB(A) 8 times as loud
90		Power Mower (96) Boeing 737, DC-9 @ 6080 Ft. Before Landing (97) Motorcycle @ 25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 times as loud
80		Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 times as loud

Continued

TABLE W (Cont.)

## TYPICAL A-WEIGHTED SOUND LEVELS

(Sound Levels and Loudness of Illustrative Noises in Indoor and Outdoor Environments)

dB(A)	OVERALL LEVEL		LOUDNESS	
	Sound Pressure Level Approx. 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	Human Judgement of Different Sounds Levels
70	Moderately Loud	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 ± 6)	Living Room Music (76)  TV-Audio, Vacuum Cleaner	70 dB(A)
60		Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	Quiet	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
	Just Audible	(dB(A) Scale Interrupted)		
10	Threshold of Hearing			

Source: Melville C. Branch and R. Dale Beland, Outdoor Noise in the Metropolitan Environment. Published by the City of Los Angeles, 1970, p 2.



SPEECH INTERFERENCE is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level.

SLEEP INTERFERENCE is a major noise concern because sleep is the most noise sensitive human activity. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

PHYSIOLOGICAL RESPONSES are those measurable effects of noise on people which are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are signs of harm.

ANNOYANCE is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

### Standards

Community noise is generally not a steady state and varies with time. Under conditions of non-steady state noise, some type of statistical metric is necessary in order to quantify noise exposure over a long period of time. Several rating scales have been developed for describing the effects of noise on people. They are designed to account for the above known effects of noise on people.

Based on these effects, the observation has been made that the potential for noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. These scales are the Equivalent Noise Level (LEQ), the Day Night Noise Level (LDN), and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 15 minutes, 1 hour, or 24-hours.

LDN is a 24-hour, time-weighted annual average noise level. Time-weighted refers to the fact that noise which occurs during certain sensitive time periods

is penalized for occurring at these times. In the LDN scale, those events that take place during the night (10 p.m. to 7 a.m.) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where sleep is the most probable activity.

CNEL is similar to the LDN scale except that it includes an additional 5 dBA penalty for events that occur during the evening (7 p.m. to 10 p.m.) time period. Either LDN or CNEL may be used to identify community noise impacts. Examples of CNEL noise levels are presented in Exhibit 3 of Appendix H.

The public reaction to different noise levels varies from community to community. Extensive research has been conducted on human responses to exposure of different levels of noise. Exhibit 4 in Appendix H relates LDN noise levels (approximately equal to CNEL noise levels) to community response from some of these surveys. Community noise standards are derived from tradeoffs between community response surveys and economic considerations for achieving these levels.

Intermittent or occasional noise such as those associated with stationary noise sources is not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the LDN scale. To account for intermittent noise, another method to characterize noise is the Percent Noise Level (L%). The Percent Noise Level is the level exceeded X% of the time during the measurement period.

Noise Ordinances are typically specified in terms of the percent noise levels. Ordinances are designed to protect people from non-transportation related noise sources such as music, machinery, and vehicular traffic on private property. Noise Ordinances do not apply to motor vehicle noise on public streets or other transportation related noise sources that are preempted by the State or Federal government.

### Noise/Land Use Compatibility Guidelines

The purpose of this section is to present information regarding the compatibility of various land uses with environmental noise. It is from these guidelines and standards, that the City of Cloverdale Noise Criteria and Standards have been developed. Noise/land use guidelines have been produced by a number of Federal and State agencies including the Federal Highway Administration (FHWA), the Environmental Protection Agency (EPA), the Department of Housing and Urban Development, the American National Standards Institute, and the State of California. These guidelines, presented in the following paragraphs, are all based upon cumulative noise criteria such as LEQ, LDN, or CNEL.

## EPA

In March 1974 the Environmental Protection Agency (EPA) published a very important document entitled "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety" (EPA 550/9-74-004). According to this document, 55 LDN is described as the requisite level with an adequate margin of safety for areas with outdoor uses. This includes residences, and recreational areas. The EPA "levels document" does not constitute a standard, specification or regulation, but identifies safe levels of environmental noise exposure without consideration for economic cost for achieving these levels.

## FHWA

The Federal Highway Administration (FHWA) has adopted and published noise abatement criteria for highway construction projects. The noise abatement criteria specified by the FHWA are presented in Table X in terms of the maximum one hour Noise Equivalent Level (LEQ). The FHWA noise abatement criteria basically establishes an exterior noise goal for residential land uses of 67 LEQ and an interior goal for residences of 52 LEQ. The noise abatement criteria applies to private yard areas and assumes that typical wood frame homes with windows open provide 10 dB noise reduction (outdoor to indoor) and 20 dB noise reduction with windows closed.

## State of California

The State of California requires each City and County to adopt Noise Elements of their General Plans. Such Noise Elements must contain a Noise/Land Use compatibility matrix. A recommended (but not mandatory) matrix is presented in the "Guidelines for the Preparation and Content of Noise Elements of the General Plan," (Office of Noise Control, California Department of Health, February 1976). Table Y presents this recommended matrix.

## City of Cloverdale

The City of Cloverdale Noise Element of the General Plan contains recommended exterior noise levels for various types of land uses. Recognition of the adapted community noise levels implies that acoustical analysis may be required in areas where the standard is or may be exceeded, and that structural modifications for new development (more insulation, building orientation, etc.) may be necessary. The noise levels are presented as guidelines as shown in Table Z for noise control to be used to determine what development proposals may require noise mitigation measures. The City recommends interior sound levels not to exceed 45 dB for residential structures. The City does not have any indoor noise standards for other building uses.



TABLE X  
FHWA NOISE ABATEMENT CRITERIA

ACTIVITY CATEGORY	DESIGN NOISE LEVEL-LEQ	DESCRIPTION OF ACTIVITY CATEGORY
A	57 (Exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of open spaces, or historic districts which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas and parks which are not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Category A or B above.
D	-	For requirements of undeveloped lands see FHWA PPM 773.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source:       Mestre Greve Associates



TABLE Y

## CALIFORNIA LAND USE/NOISE GUIDELINES

Land Use Category	Community Noise Exposure Ldn or CNEL, dB					
	55	60	65	70	75	80
Residential-Low Density Single Family, Duplex, Mobile Homes						
Residential - Multiple Family						
Transient Lodging - Motels, Hotels						
Schools, Libraries, Churches, Hospitals Nursing Homes						
Auditoriums, Concert Halls, Amphitheaters						
Sports Arena, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Residential						
Industrial, Manufacturing Utilities Agriculture						

Continued

Source: Mestre Greve Associates

## TABLE Y (Cont.)

### CALIFORNIA LAND USE/NOISE GUIDELINES

Notes:



Normally Acceptable

Specified land use is satisfactory, based upon the assumption that any buildings involved are normal conventional construction, without any special noise insulation requirements



Conditionally Acceptable

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



Normally Unacceptable

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



Clearly Unacceptable

New construction or development should generally not be undertaken.

**TABLE Z**  
**PERMISSIBLE EXTERIOR NOISE LEVELS**

LAND USE	MAXIMUM LDN dBA	OPTIMUM LDN dBA
Residential	65	45-55 <sup>1</sup>
Institutional	65	55
Recreation	70	60
Office-Professional	75	65
General Commercial/Industrial	80	70

Source: City of Cloverdale General Plan

<sup>1</sup> Single-Family (45); Multi-Family (55)

## EXISTING ACOUSTIC ENVIRONMENT

This section contains a detailed description of the current noise environment within the City. This description of the noise environment is based on an identification of noise sources and noise sensitive land uses, a community noise measurement survey, and noise contour maps.

To define the noise exposure, this section of the report first identifies the major sources of noise in the community. The sources of noise in Cloverdale include: Highway 101/Cloverdale Boulevard, other arterial roadways, the Northwestern Pacific Railroad, and the Municipal Airport. To completely assess the noise environment in the City, noise sensitive receptors must also be identified. As mandated by the State, noise sensitive receptors include, but are not limited to, residential areas, areas containing schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use areas deemed noise sensitive by the local jurisdiction.

### Noise Sources and Levels

#### **Vehicular**

The predominant land use in the City is residential and should also be considered the most noise sensitive. Other noise sensitive land uses include schools and parks. Maintenance of a relatively quiet ambience is important to maintaining the overall atmosphere of the area.



The predominant noise source in Cloverdale is motor vehicles. Highway 101/Cloverdale Boulevard appears to be the most significant noise source in Cloverdale. Other roadways in the City do not have traffic volumes sufficient to generate significant noise impacts.

The traffic noise contours for existing conditions are presented in tabular format in Table AA and graphic format in Exhibit 13. These traffic noise levels were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the LEQ noise level. A computer code has been written which computes equivalent noise levels for each of the time periods used in CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. The traffic data used to project these noise levels are derived from the City of Cloverdale General Plan. The traffic mixes and time distributions for the arterials are presented in Tables BB and CC. The traffic mix data for the arterials are based on measurements for roadways in Southern California and are considered typical for arterials in this area.

According to Table AA, the only identifiable noise impacts in the City of Cloverdale are those associated with the existing Highway 101/Cloverdale Boulevard, where there is some degree of land use conflict associated with the excessive noise levels along this corridor. The noise levels along the corridor may exceed 70 CNEL within 120 feet of the centerline of the corridor. Those areas along Highway 128 and First Street will experience noise levels less than 65 CNEL. The remaining portions of the City will experience noise levels generally less than 60 CNEL. The values given in Table AA do not take into account the effect of any noise barriers or topography that may affect ambient noise levels.

## **Railroad Noise**

Railroad operations within the Cloverdale General Plan Area are confined to the activities of the Northwestern Pacific Railroad (N.W.P.R.R.) Company which owns and operates approximately 9,600 feet of linear track along the eastern flank of the City. A number of residences in the vicinity of Railroad Avenue/Mulberry Street/First Street may experience intermittent excessive exterior noise levels. The "Assessment of Noise Environments Around Railroad Operations," (Wyle Laboratories Report WCR-73-5, July 1973) was used to model the train noise levels on the project site. The noise generated by a train pass-by can be divided into two components: that generated by the engine or locomotive, and that due to the railroad cars. The characteristic frequency of the engine is different than that for the cars. The effective radiating frequency is 1,000 Hz for the locomotive engines, and 2,000 Hz for the portion of the noise generated by the cars. The noise generated by the engine is the

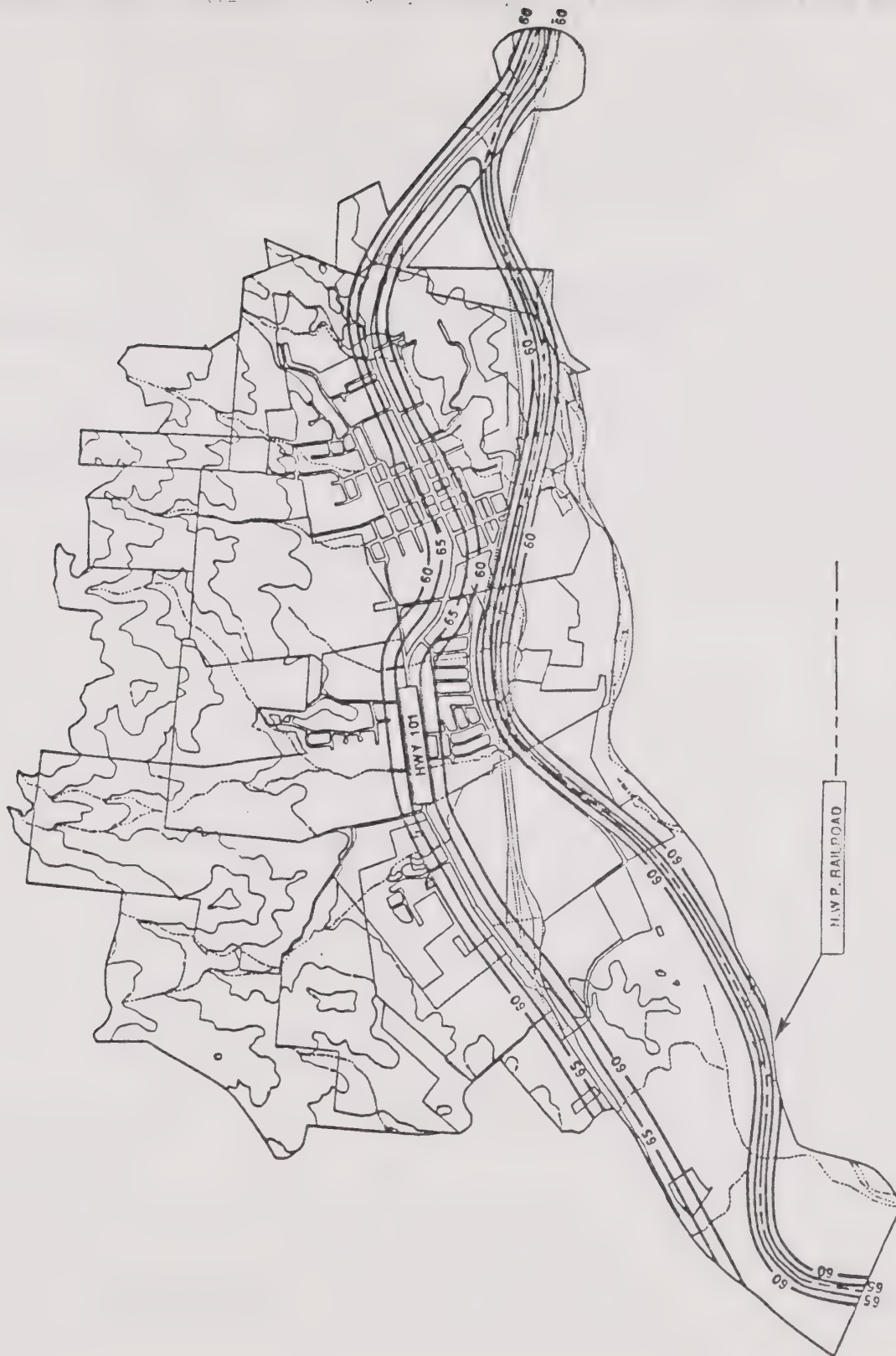


TABLE AA  
EXISTING (1989) TRAFFIC NOISE CONTOURS

ROADWAY	ADT	SPEED	DISTANCE TO CNEL CONTOUR (FEET)		
			70 CNEL	65 CNEL	60 CNEL
I-101/Cloverdale Boulevard					
North of I-128	11,600	55	79	169	365
South of I-128	13,500	55	87	187	404
North of 1st St.	18,600	55	108	232	
South of 1st St.	20,400	55	115	247	532
North of Hot Springs Rd.	20,000	55	113	244	525
South of Hot Springs Road	18,300	55	107	230	494
I-128					
West of Cloverdale Blvd.	2,300	55	RW	RW	73
1st Street					
West of Cloverdale Blvd.	2,000	45	RW	RW	66
East of Cloverdale Blvd.	4,600	45	RW	RW	115
West of Crocker Rd.	3,100	45	RW	RW	89

Source: Mestres Greve Associates

Notes: RW - Contour falls inside the roadway right-of-way  
ADT - Average Daily Trips  
Speed - Speed is in miles per hour



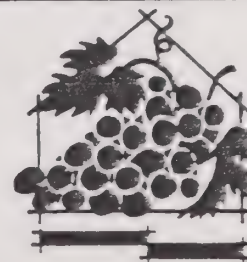
Source: Mestre Greve Associates

# EXISTING CNEL NOISE CONTOURS

## GENERAL PLAN

City of Cloverdale

13



no scale



TABLE BB

TRAFFIC DISTRIBUTION PER TIME OF DAY  
IN PERCENT OF ADT FOR HIGHWAYS

VEHICLE TYPE	PERCENT OF ADT		
	DAY	EVENING	NIGHT
Automobile	65.52	10.08	8.40
Medium Truck	3.43	0.53	0.44
Heavy Truck	9.05	1.39	1.16

Source: Mestres Greve Associates

Note: ADT = Average Daily Trips

TABLE CC

TRAFFIC DISTRIBUTION PER TIME OF DAY  
IN PERCENT OF ADT FOR ARTERIALS

VEHICLE TYPE	PERCENT OF ADT		
	DAY	EVENING	NIGHT
Automobile	75.51	12.57	9.34
Medium Truck	1.56	0.09	0.19
Heavy Truck	0.64	0.02	0.08

Source: Mestres Greve Associates

Note: ADT = Average Daily Trips



result of the mechanical movements of the engine parts, the combustion process, the horn if used, and to a lesser extent the exhaust system. The noise generated by the cars is a result of the interaction between the wheels and the railroad tracks. A zero source height is used for the car noise and a source height of 10 feet above the track is used for the locomotive. The train noise levels are calculated by summing the noise generated by the locomotive and the noise generated by the cars.

Data on railroad operations were obtained from Mr. Jim Huffman at the Northwestern Pacific Railroad office (September 18, 1990). The railroad line is used for freight train operations only. Two freight train operations per day typically pass through the City during the nighttime period. One freight train travels north between 10 p.m. and 11 p.m. and one travels south at approximately 11 p.m. The trains do not operate on a set schedule, but there are no train operations in the daytime. Each freight train which runs through the City has an average of 25 cars and operates at speeds between 30 and 40 miles per hour. The Operation Officer anticipated that in the near future, the operations of the freight train going through the City will remain the same. Table DD shows the time distribution of the trains.

The operational data was used in conjunction with the Wyle Model to project train noise levels on the project site. The results of the train noise projections are displayed in Table EE which shows the distances from the centerline of the tracks to the 60, 65, and 70 CNEL noise level contours. The noise projections do not include the effects of topography or barriers which may reduce the noise levels.

The results in Table EE indicate that the area adjacent to the Northwestern Pacific railroad tracks will be exposed to noise levels greater than 65 CNEL. It is estimated that the 65 CNEL noise contour along the existing railroad alignment extends approximately 115 feet on either side of the track. The 60 CNEL noise contour is estimated to be at approximately 247 feet from the track. Those existing residences along the railroad tracks may experience intermittent excessive train noise levels during the nighttime hours (typically around 10 p.m. and 11 p.m.). The 60 and 65 CNEL contour levels are also shown on Exhibit 13.

### **Aircraft Noise**

The Cloverdale Municipal Airport is located in the extreme southeast corner of the City. This airport operates all types of commercial aircrafts from single and twin engine to business jets. The airport's overflight impacts are concentrated along the typical or median traffic pattern flight tracks. With the traffic pattern located only on the east side of the airport, the resulting impacts on the west side are minimal.

TABLE DD  
TRAIN TIME DISTRIBUTION

TIME PERIOD	NUMBER OF TRAINS FREIGHT
Day	0
Evening	0
Night	2

Source:      Northwestern Pacific Railroad Company

TABLE EE  
RAILROAD NOISE LEVELS

	DISTANCE TO CNEL CONTOUR FROM <u>CENTERLINE OF RAILWAY (FEET)</u>		
	70 CNEL	65 CNEL	60 CNEL
Freight train	33	115	247

Source:      Mestre Greve Associates

The 1988 aircraft noise contours for the Cloverdale Municipal Airport are shown in Exhibit 14. The contours are taken from the Cloverdale Municipal Airport Master Plan Report, October 1988. The contours indicate that the aircraft noise levels are minimal and occur only in those areas closest to the airport. The existing aircraft noise levels around the airport vicinity is approximately 55 CNEL.

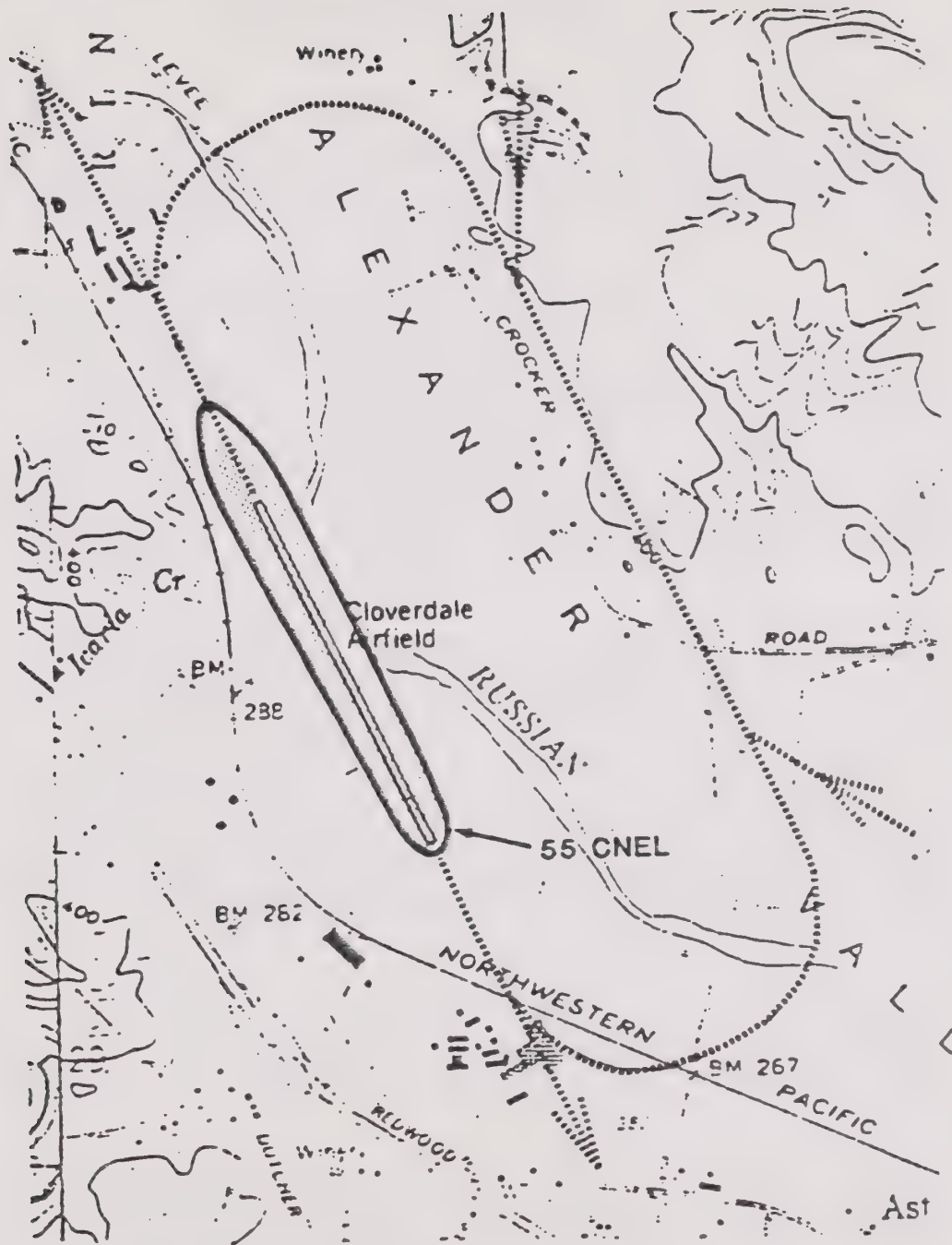
### Noise Sensitive Land Uses

The most noise sensitive land use in Cloverdale is residential development. Residential development is spread throughout the City. It is considered especially noise sensitive because (1) considerable time is spent by individuals at home, (2) significant activities occur outdoors, and (3) sleep disturbance is most likely to occur in a residential area. Additionally, the City of Cloverdale has a number of public and private educational facilities, churches, and parks that are considered noise sensitive. These facilities are generally located in the center of the City.

Noise contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contours are the 60, 65, and 70 CNEL noise level for the traffic noise contours. The noise contours presented should be used as a guide for land use planning. The 60 CNEL contour defines the Noise Referral Zone. This is the noise level for which noise considerations should be included when making land use policy decisions. The 65 CNEL contour describes the areas for which new noise sensitive developments will be permitted only if appropriate mitigation measures are included such that the standards contained in this element are achieved.

### FINDINGS

1. Highway 101/Cloverdale Boulevard is a major noise contributor in Cloverdale due to vehicular traffic.
2. The Northwestern Pacific Railroad is a noise contributor in Cloverdale in the evening hours.
3. The Cloverdale Municipal Airport is a minor noise contributor in Cloverdale.
4. Collector roadways are minor noise contributors in Cloverdale.
5. There is some degree of land use conflict associated with excessive noise levels along the Highway 101/Cloverdale Boulevard corridor.
6. The noise contours presented should be used as a guide for land use planning. The 60 CNEL contour defines the Noise Referral Zone. This is the noise level for which noise considerations should be included when making land use policy decisions. The 65 CNEL contour describes the areas for which new noise sensitive developments will be permitted only if appropriate mitigation measures are included such that the standards contained in this element are achieved.



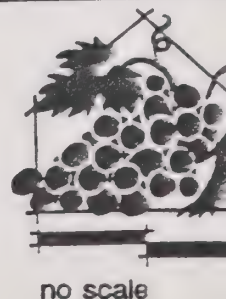
Source: Mestre Greve Associates

# AIRCRAFT CNEL NOISE CONTOUR

## GENERAL PLAN

City of Cloverdale

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## HEALTH AND SAFETY

### INTRODUCTION

The City of Cloverdale is located in an area subject to natural hazards. This section provides data and information related to fire hazards, seismic hazards, hydrology/flooding, and hazardous waste.

### FIRE HAZARDS

The combination of highly flammable fuel, long dry summers and steep slopes creates a significant natural hazard of large wildland fires in many areas of Sonoma County. Wildland fire results in death, injury, economic losses and a large public investment in fire fighting efforts. Woodlands and other natural vegetation are destroyed resulting in the loss of timber, wildlife habitat, scenic quality and recreation. Soil erosion, sedimentation of fisheries and reservoirs, and downstream flooding can also results (Sonoma County General Plan, 1989).

Most damage results from a few large fires in the dry weather months. There were 42 wildland fires of 100 acres or more in the County between 1965 and 1984.

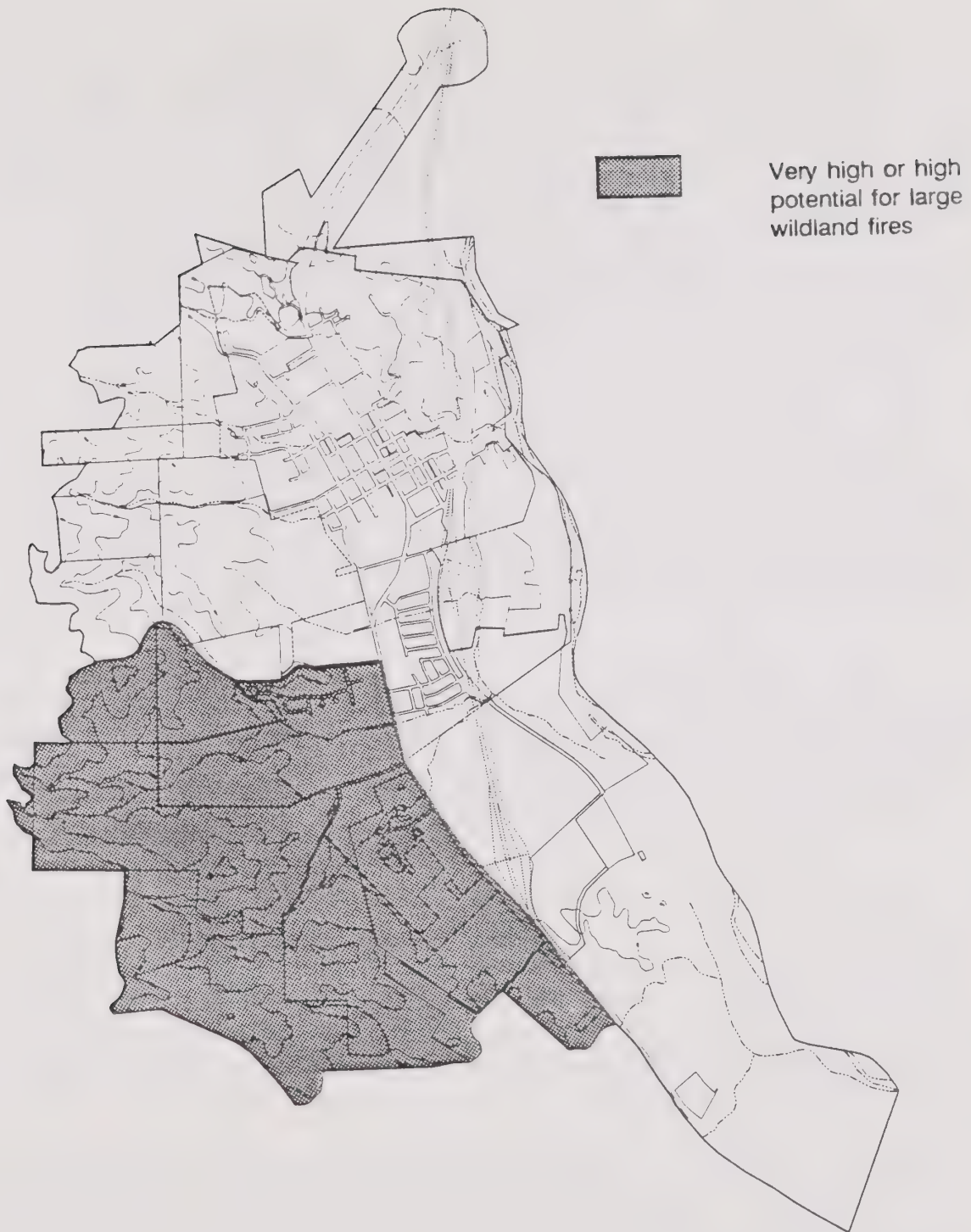
The California Department of Forestry (CDF) has developed a Fire Hazard Severity Scale which utilizes three criteria in order to evaluate and designate potential fire hazard areas in wildland areas. The criteria are fuel loading (vegetation), fire weather (winds, temperatures, humidities, and fuel moisture contents) and topography (degree of slope). Vegetation clearance standards are enforced by the Department of Forestry (Cloverdale General Plan 1978).

Residences have increased the number of fires in hazardous rural areas. Human activities now account for 9 out of 10 wildland fires. Residences in rural areas cause fire suppression agencies to devote limited resources to structural protection while the wildfire spreads.

The probability of large damaging fires in urban areas is affected by whether conditions and the spread of fires in surrounding wildland areas. The type of construction, preventive measures, and the extent of fire suppression services are the chief factors which determine how far these fires spread (Sonoma County General Plan, 1989).

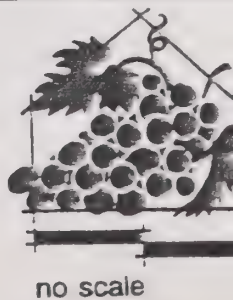
Fire hazard severity has been mapped by the CDF. The highest hazard is found in mountainous areas with dry summers, plenty of fuel, and steep slopes. In general, the City of Cloverdale is classified as an area of low fire hazard risk with the exception of areas to the southwest and northeast portion of the City which are situated on steeper slopes and have more vegetation. Exhibit 15 shows areas with high or very high risk.





Source: Sonoma County General Plan

**FIRE HAZARDS**  
**GENERAL PLAN**  
City of Cloverdale







The City of Cloverdale Fire Department's Response Zone for wildland fires extends to the Mendicino and Lake County borders on the north and west, to Oak Ridge on the west, and halfway to Geyserville on the south. Please refer to Exhibit 12 in the Public Services and Utilities section. This area has experienced several major wildland fires in the last three years. In 1987, there was a large wildland fire of approximately 2000 acres in the Palomino Lakes area. In August 1988, powerlines caused a fire of approximately 100 acres in the Preston Ranch area. During July 1989, two small fires occurred in the area. One fire in the Preston Ranch area was 10 acres. Another fire burned 60 acres near Geyserville Road and was caused by arson (phone interview, Fire Captain Rich Blackman, August 31, 1990).

## SEISMIC HAZARDS

Earthquakes give rise to various seismic hazards including surface faulting, ground shaking, associated ground failure, generation of large waves in bodies of water, and regional subsidence or downwarping. Seismic hazards can cause damage to structures and risk the health and safety of citizens. Seismic hazards vary widely from area to area, and the level of hazard depends on both geologic conditions and the extent and type of land use (U.S. Geological Survey 1974).

Regional and local geology has been largely abstracted from several documents including Seismic Hazards and Land-Use Planning published by the U.S. Geological Survey in 1974. In addition, the Public Safety Element of the Sonoma County General Plan is also referenced as it contains information on Cloverdale and the General Plan study area. The County Public Safety Element is based on a regularly updated background report.

### Surface Faulting

Faults are areas of failure along surfaces in earth materials where the materials on opposite sides of the failure have moved relative to one another in response to the accumulation of stress. Any fault movement beneath a building in excess of an inch or two could have catastrophic effects on structures depending on design and construction and the shaking stresses the structure undergoes at the same time (U.S. Geological Survey 1974).

During the last 200 years, several major earthquakes of Richter Magnitude 7.0 or greater have occurred in the San Francisco region, resulting in loss of life and large amounts of structural damage. The most recent event took place October 17, 1989, when a 7.1 magnitude earthquake struck the Bay Area. The epicenter was located north of the City of Santa Cruz. Cloverdale experienced a light shock which only lasted a few seconds. No appreciable damage occurred.

The Richter Magnitude Scale is a logarithmic scale developed by Charles Richter to measure earthquake magnitude by the amplitude of the seismic waves, as opposed to earthquake intensity (Press, Siever, 1982). The largest recorded earthquakes in the area were in 1836

and 1868 on the Hayward fault and in 1906 on the San Andreas fault. The heaviest damage resulted from liquefaction and rapid settlement in areas underlain by soft bay mud and fill material. In Santa Rosa, heavy damage resulted from intense ground shaking amplified by the presence of loose fill in old stream channels and by the saturation of alluvium at shallow depths (Greensfelder, Roger, 1980).

Active faults in northern Sonoma County include the San Andreas, Maacama, and Rodgers Creek-Healdsburg faults. The Geyser Peak and Mercuryville faults, and other shorter faults in the Geysers area and south of Asti are also considered to have a potential for significant seismic activity because of Quaternary period displacement. Faults in Sonoma County roughly parallel the northwest-southeast course of the San Andreas Fault. The closest active fault in Sonoma County to the study area is the Maacama Fault. This fault runs near the City approximately 4 miles east of Cloverdale. Exhibit 16 shows active and inactive faults near the study area.

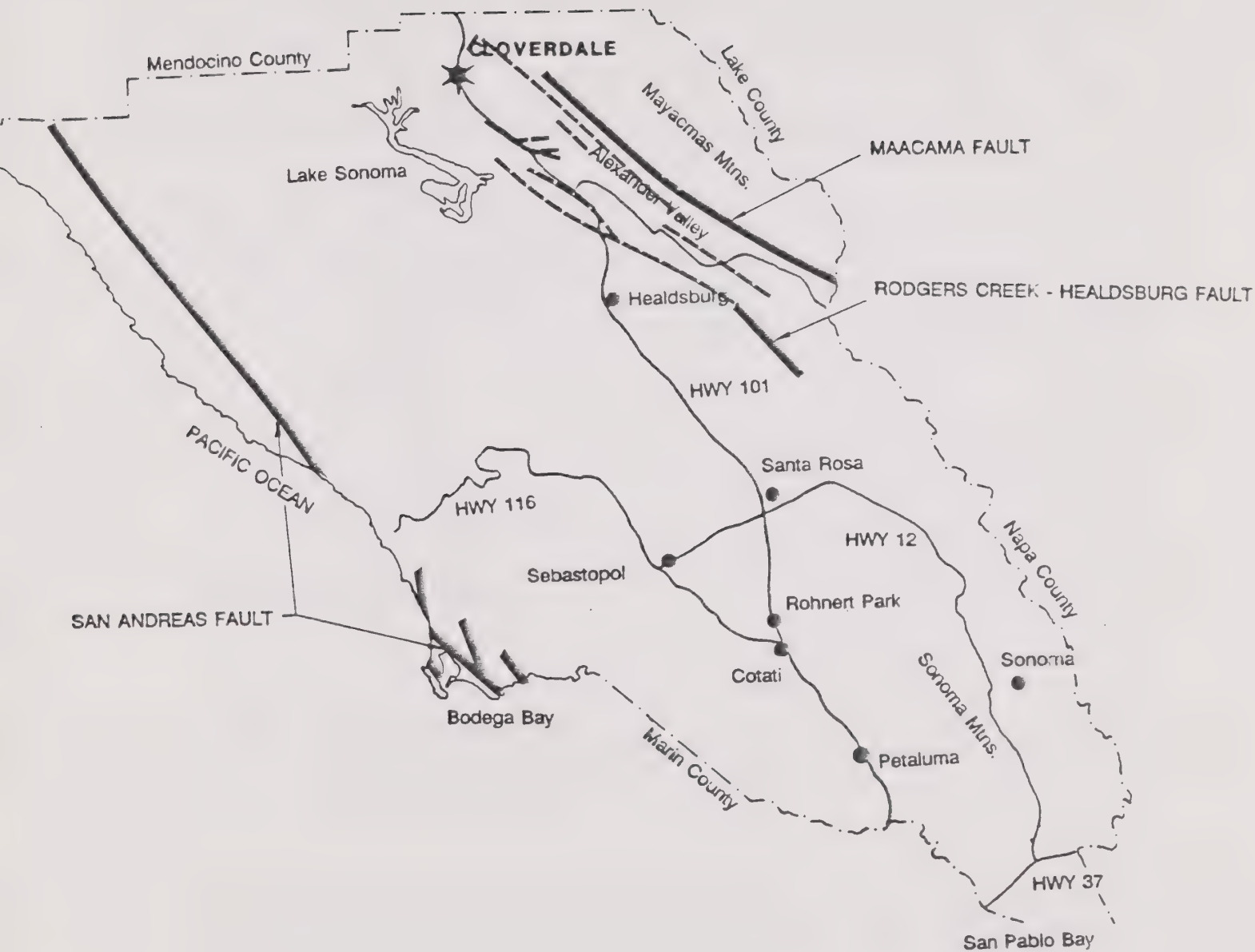
Strong geomorphic evidence of Quaternary (within the last two million years) surface movement on the Maacama fault includes offset exposed in a road cut on Highway 128 and approximately 1.25 miles southeast of Big Sulphur Creek (Greensfelder, 1980).

In October 1969 two moderate earthquakes of magnitudes 5.6 and 5.7 occurred on the Healdsburg-Rogers Creek fault, on the north side of Santa Rosa, approximately 20 miles south west of the study area. These earthquakes caused unexpected damage to earthquake-resistant buildings and deformation of the underlying alluvium in the form of lurching or collapse of unconsolidated fill. (Steinburgge, 1970)

### Ground Shaking

Earthquake ground shaking in many instances causes the most widespread earthquake damage. The intensity of groundshaking can be several times larger on sites underlain by thick deposits of saturated sediments than on bedrock. The amplification effects of local geologic deposits, the amount of ground shaking at a particular site, depends on (1) characteristics of the earthquake source (magnitude, location, and area of causative fault surface) and (2) distance from the fault.

The energy that is released as the earth's crust moves at the earthquake focus is transmitted as elastic waves up through the bedrock to become a series of complex waves or oscillations in surficial materials. Most soils (surficial material) and rocks have elastic properties up to certain levels of stress. If the stress load of an earthquake is too great, the soils and rocks will deform.



ALQUIST-PRIOLO SPECIAL STUDIES ZONES



OTHER FAULT ZONES CONSIDERED POTENTIALLY ACTIVE

Source: STA Planning, Inc.

# FAULTS NEAR THE STUDY AREA

## GENERAL PLAN

City of Cloverdale

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no scale





A subjective measure of the force of an earthquake at a particular place as determined by its effects on persons, structures, and earth materials. The principal scale used is the Modified Mercalli Scale is a measure of earthquake intensity. Lower numbers on the scale indicate less severe shaking and are based on what people feel; intermediate numbers are assigned according to the type and amount of building damage sustained, and higher numbers principally to secondary geologic effects (U.S. Geological Survey 1974). Table FF summarizes the Modified Mercalli Scale in relation to the Richter Scale.

Potentially damaging groundshaking (modified Mercalli intensity VII or greater) resulting from earthquake activity will occur somewhere in Sonoma County every 20 to 30 years. (Greensfelder, 1980). Studies suggest "[t]he likely transfer of slip northward from the Hayward to the Healdsburg, Rodgers Creek, and Maacama fault zones implies a zone of high seismic hazard extending north of San Francisco Bay as well (Wesnousky 1986). Recent research has been conducted in the North Bay area near San Francisco (Wong 1990). Results show the following:

Contemporary seismicity north of the San Francisco Bay region in northern California has been concentrated along two major fault zones east of the seismically quiet San Andreas fault: the Rodgers Creek - Maacama and the Green Valley - Bartlett Springs faults (Cockerham, 1986; Eberhart-Phillips, 1988). Furlong et al. (1989) suggest that these zones represent young faulting possibly related to a newly developing plate boundary.

...Based on a contrast in deformation, Fox (1983) has defined two structural blocks in the region north of San Francisco Bay: the Sebastopol block on the west and the relatively intensely deformed (folded) Santa Rosa block to the east. The latter is cut by eight major north-northwest-trending right-lateral, strike-slip faults or fault systems including the Tolay, Rodgers Creek, Healdsburg, Maacama, Bennett Valley, Carneros, West Napa, and Green Valley faults...

The eastern boundary of the Coast Ranges and the Santa Rosa block (?) coincides with a postulated 600 km-long zone of complex thrust/reverse faulting which forms the boundary between the Coast Ranges and the western portion of the Sierran block (the Great Valley) (Wong and Ely, 1983; Wong et. al. 1988; Wentworth and Zoback, 1989). Significant crustal deformation has and is occurring along the San Andreas fault and to a lesser degree, along the CRSB boundary zone and on numerous faults in between.

Information on maximum credible earthquakes affecting the City of Cloverdale is presented on Table GG. Maximum probable earthquakes are normally estimated at .25 to .5 less in magnitude than a maximum credible earthquake. Historic earthquakes are also a good indicator of maximum probable earthquakes (phone interview, Kit Custis, Division of Mines and Geology, September 10, 1990). Historic earthquakes are discussed on the previous pages.

TABLE FF

## MODIFIED MERCALLI SCALE IN RELATION TO RICHTER SCALE

Richter Magnitude	Expected Modified Mercalli Maximum Intensity at Epicenter	
2	I - II	Usually detected only by instruments
3	III	Felt indoors
4	IV - V	Felt by most people; slight damage
5	VI - VII	Felt by all; many frightened and run outdoors; damage minor to moderate
6	VII - VIII	Everybody runs outdoors; damage moderate to major
7	IX - X	Major damage
8 +	X - XII	Total and Major Damages

Source: US Geological Survey Circular 690, 1974

TABLE GG  
ACTIVE AND POTENTIALLY ACTIVE FAULTS

Fault	Length (km)	Distance <sup>1</sup>	Moment Magnitude	Horizontal Acccler- ation (g) <sup>2</sup>	Rupture Repeat Time (Yrs)
Hayward	51	128	7.1	>.01	556
Healdsburg	32	33	7.0	.10+	228
Maacama	151	6	7.6	.70	696
Rodgers Creek	38	44	6.9	.07	255
San Andreas (Shelter Cove to San Juan Bautista)	420	25	7.8	.25	300

Source: Wesnousky 1986  
USGS Professional Paper 1360

Notes: <sup>1</sup>Estimated distance in kilometers from the City to the fault.  
<sup>2</sup>"g" stands for acceleration gravity.



## Ground Failure/Soil Stability

Earth materials in a natural conditions tend to reach equilibrium over a long period of time. In geologically young and active areas such as California, there are many regions where earth materials have not yet reached a natural state of stability. Many valleys and bay margins are underlain by recent loose materials that have not been compacted and hardened by long-term natural processes (U.S. Geological Survey 1974).

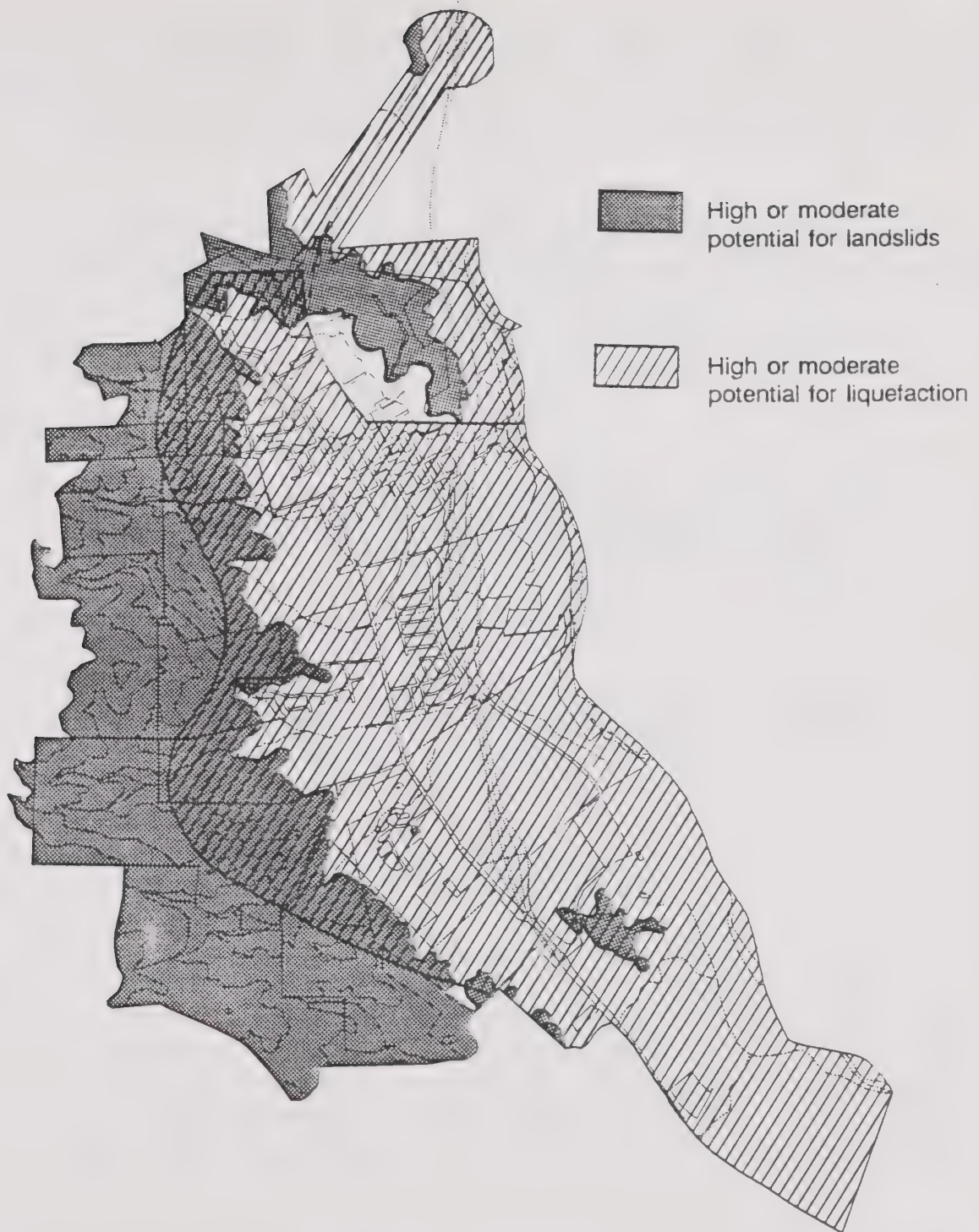
Landslides are common on most of the hills and mountains as loose material moves downslope. In addition, many activities of man tend to make the earth materials less stable and increase the chance of ground failure. Some of the natural causes of instability are earthquakes, weak materials, stream and coastal erosion, and heavy rainfall. Human activities that contribute to instability include oversteepening of slopes by undercutting them or overloading them with artificial fill, extensive irrigation, poor drainage or even groundwater withdrawal, and removal of stabilizing vegetation. These causes of failure, which normally produce landslides and differential settlement, are augmented during earthquakes by strong ground motions that result in rapid changes in the state of earth materials (U.S. Geological Survey 1974).

It is these changes by means of liquefaction and loss of strength in fine-grained materials, that result in many landslides during earthquakes as well as differential settlement, subsidence, ground cracking, ground lurching and other changes in the ground surface. There are no known occurrence of ground failure due to earthquake within the study area (US Geological Survey 1978).

According to the Sonoma County General Plan, the most common type of ground failure in Sonoma County is landslides, the downslope movements of soil and/or rock materials. Extensive land areas of the county are subject to this hazard. Landslides can be triggered by heavy rainfall, earthquakes or human activities such as road cuts, grading, construction, removal of vegetation, and change in drainage. Extensive land areas of the County are subject to this hazard, and few structures can withstand landslides. Exhibit 17 adapted from the County General Plan estimates the risk of landslide in Cloverdale as negligible to low. Areas of alluvial deposits in the valley floor and below the 400 foot contour exhibit stable conditions relative to seismic shaking, and/or landslide potential. The hills above the 400 foot line in the study area to the west of the City are at risk for landslides (Sonoma County General Plan, 1989).

## Liquefaction

Liquefaction is a common mechanism causing many types of ground failure. It occurs when the strength of saturated, loose, granular materials (silt, sand, or gravel) is dramatically reduced, such as may occur during an earthquake. The earthquake-induced deformation transforms a stable granular material into a fluidlike state in which the solid particles are virtually in suspension, similar to quicksand (U.S. Geological Survey 1974).



Source: Sonoma County General Plan

# LANDSLIDES AND LIQUEFACTION

## GENERAL PLAN

City of Cloverdale

17



no scale





In Cloverdale, the area below the 400 foot contour elevation is comprised of Holocene alluvial deposits of between 0 to 50 feet in depth. The average depth to groundwater in this area is approximately 20 to 30 feet. Since alluvial deposits are relatively shallow, liquefaction hazards within this area are considered to be moderately low. (Cloverdale General Plan, 1978)

The lands above the 400 foot contour elevation exhibit characteristics of generally minimal liquefaction hazard. There may be local deposits of slope-wash colluvium and alluvium which are subject to collapse during an earthquake of significant magnitude. Such seismically induced slope failures may be a problem in areas exceeding 15 percent slope. Refer to Exhibit 17.

### Tsunamis/Seiche

Tsunamis are large ocean waves caused by undersea earthquakes or landslides. They travel up to 400 mph and can arrive at a coastline before local warnings can be given. The area covered by a tsunami is determined by water depth, underwater topography, and shape of the coastline. A tsunami expected once in 200 years would flood the coast and bay shoreline up to 20 feet above sea level. (Sonoma County General Plan, 1989)

A seiche is an abnormally high fluctuation in the water level of a bay or lake which can be compared to the back-and-forth sloshing of water in a tub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, or landslides into the water. Seiches caused by winds or atmospheric pressure changes may measure in inches whereas seiches caused by underwater earthquakes or landslides into the water have caused runups of several hundred feet (vertical) above the normal water level. Such extreme cases are rare (U.S. Geological Survey 1974)

Hazards from seiches can roughly be estimated for river and reservoir shorelines through examination of historic records. Potential areas of catastrophic inundation from dam and reservoir failure or from landslide - generated waves that overtop dam crests can be mapped for all large bodies of water perched above populated areas (U.S. Geological Survey 1974). The Study Area is protected from the threat of seiche and tsunami by its location 25 miles inland and shielded by the ridgeline between the Pacific Ocean and the study area. This topographical feature shields the study area from bodies of water that may experience seiches or tsunamis.

### Dam Failure

Earthquake damage to utilities and other public facilities can produce disastrous secondary effects. These secondary effects can be reduced by various methods but larger facilities and population growth increase the potential damage.



Downstream flooding may result from dam failure. Warm Springs Dam is located on a medium-sized fault but was designed to absorb the maximum expected displacement and groundshaking from any fault in the region. The inundation area does not affect the study area.

Dam failure of the Coyote Dam east of Ukiah would affect a portion of the study area. The inundation from Coyote Dam failure would include all of the study area east of the railroad tracks. The 300 foot inundation level would reach its peak 11 hours after failure. The inundation area is approximately the same as the 100-year flood zone.

### Unreinforced Masonry Buildings

In 1986 a bill (S.B. 547 [Alquist]) was passed in the State Legislature requiring that all types of unreinforced masonry (RM) buildings be inspected. This bill has since been codified (Government Code Sec. 8875 et seq.). All local jurisdictions within Zone 4 of the Seismic Safety Zone, which generally includes most of the coastal areas westward to the Central Valley, must comply. Cloverdale is located within this zone.

Specifically the law requires that any potentially hazardous URM buildings be identified. These buildings are especially vulnerable to damage caused by earthquakes and associated groundshaking and liquefaction. Next a mitigation program must be developed to reduce the hazards. Last, the jurisdiction was required to submit the information on potentially hazardous buildings and mitigation programs to the State Seismic Safety Commission by January 1, 1990.

Several types of buildings are exempt from inspection under the law. These include warehouses and similar buildings with few occupants, unless used for emergency services or supplies, residential buildings with five or fewer living units, and buildings owned by the federal or state government.

Historic buildings are exempt from the identification stage. The Seismic Safety Commission believes that historic buildings should be included in the mitigation programs. Historic property includes "objects, buildings, structures, monuments, or collections thereof on existing national, state or local historic registers or official inventories such as the National Register of Historic Places and State Historical Landmarks" (California Health and Safety Code Section 37602).

There are a total of 22 buildings within the City of Cloverdale that are categorized as "Potentially Hazardous Buildings" under SB 547. Fifteen of the potentially hazardous buildings have unreinforced masonry bearing walls and seven have concrete frame structures. One of the Potentially Hazardous buildings is considered a historical building. Table HH lists the uses present in the unreinforced masonry buildings. Most of the buildings are in downtown Cloverdale.

TABLE HH  
UNREINFORCED MASONRY BUILDINGS

TYPE OF USE	NO. OF USES OCCUPYING BUILDINGS LISTED IN IDENTIFIED BUILDING LIST <sup>1</sup>
Retail	19
Office	2
Residential	0
Schools	0
Restaurant	3
Industrial/Manufacturing	1
Theater	1
Police/Fire	1
Museum (Historical)	1
U.S. Post Office	1
City Hall	1
Warehouse	1
Bank Building	2
Assembly Building	1
TOTAL	34

Source: Cloverdale Public Works Department

<sup>1</sup> There are 22 unreinforced masonry buildings in the City. Several of the buildings have more than one use.

## HYDROLOGY/FLOODING

Streams overflow banks when runoff from the watershed exceeds the capacity of the stream channel to carry it. Floods on small streams usually peak and recede quickly, while floods on the lower Russian River may not peak for two days or more after the start of a storm and may exceed flood storage for four days or more. Flood hazards are estimated for the area flooded by the maximum storm event expected over a 100-year period, a 10-year period or some other frequency. Exhibit 18 shows the general extent of peak flooding expected during a 100-year flood for those streams which have been studied. (Sonoma County General Plan, 1989)

Flooding can move or destroy buildings and wash away soil, crops, and loose objects. Floating debris is a very dangerous hazard. Flood damage may weaken building materials and increase mildew, dust, bacteria and other disease vectors. Public facilities, roads and services may also be affected. A particular concern is the disruption of sewage treatment facilities and resulting water quality impacts.

The principal information on flooding in Cloverdale is provided in a 1979 Flood Insurance Study prepared by the U.S. Department of Housing and Urban Development, Federal Insurance Administration. The purpose of the study was to "investigate the existence and severity of flood hazards ... and to aid in the administration of the National Flood Insurance Act of 1973." In addition, the study was intended to be used by local and regional planners to "promote sound land use and flood plain development."

Flood events of a magnitude which are expected to be equalled or exceeded once on the average during and 10-, 50-, 100-, and 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance premium rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1 and .2 percent chance respectively, of being equalled or exceeded during any year.

Although the recurrence interval represents the long term average period between floods of a specific magnitude, rare floods could occur at short intervals or even within the same year. The risk of experiencing a rare flood increases when periods greater than one year are considered.

Hydrologic analyses were carried out to establish the peak discharge-frequency relationships for floods of the selected recurrence intervals for each stream studied in detail in the community. Water bodies studied included the Russian River, Cherry Creek, Porterfield Creek, and Cloverdale Creek. The flood zones for the creeks are included on the FEMA maps and on Exhibit 18.





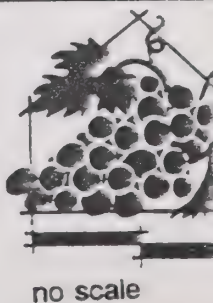
Source: Federal Emergency Management Agency, 198

# FLOODWAY MAP

## GENERAL PLAN

City of Cloverdale

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Encroachment on floodplains, such as artificial fill, reduces the flood-carrying capacity and increases flood heights, thus increasing flood hazards in areas beyond the encroachment itself. Flood plain management involves balancing the economic gain from flood plain development against the resulting increase in flood hazard.

## HAZARDOUS WASTE

In May 1989, Sonoma County prepared a Hazardous Waste Management Plan. The purpose of the Plan is to support county and regional planning providing for the proper reduction, recycling, storage, transfer, and disposal of hazardous waste within its boundaries. The County Plan is implemented on a Countywide level. The County acts as the lead agency for hazardous waste issues in the City of Cloverdale.

In 1986, approximately 50,000 tons of hazardous waste were generated in Sonoma County. Approximately two-thirds of this waste, or 33,000 tons, was generated by the geothermal industry. Other manifesting generators, small quantity generators, and Sonoma County households produced the remaining one-third (approximately 17,000 tons) of the waste. It is estimated that small quantity generators and households together produced twice as much (approximately 12,000 tons) hazardous waste as non-geothermal manifesting generators. Non-geothermal manifesting generators produced approximately 5,000 tons of hazardous waste. Because small quantity generators and households are historically the least regulated, most uncontrolled sources of hazardous wastes, their wastes are the most likely to appear in the environment.

The County Public Health Department Hazardous Materials Section and the State Water Resources Control Board (WRCB) records leaky underground storage tank sites as required by the Cortese Bill (AB 2013, Cortese, 1983), and the Sher Bill (AB 1362, Sher, 1983). The State Department of Health Services compiles a list of sites included in the Hazardous Substance Cleanup Bond Act pursuant Section 25356 of the Health and Safety Code. As of November 1990, twenty sites identified by these agencies were in the vicinity of the study area. These sites are listed in Table II.

All of the hazardous wastes generated in Sonoma County that are manifested are currently managed at commercial offsite hazardous waste management facilities located either out-of-state or in other counties in California. MGM Brakes Address: in Cloverdale is one of two facilities in the County permitted by the State for onsite waste management. The only commercial hazardous waste management facility in Sonoma County is the Safety Kleen Corporation transfer station in Rohnert Park. This facility manages solvent wastes collected from generators in Sonoma and neighboring counties. These wastes are stored at the transfer station and are periodically transported to Safety Kleen Corporation's recycling facility in Reedley (Fresno County), or are shipped out-of-state.

TABLE II  
IDENTIFIED HAZARDOUS WASTE SITES

SITE	ADDRESS	PROBLEM	IDENTIFY AGENCY
Torvik Chevrolet	27000 Asti Road	Tank Leak	WRCB
Robert A. Anderson Excavating	1175 Cloverdale Blvd.	Tank Leak	WRCB
Texaco	698 Cloverdale Blvd.	Tank Leak	WRCB
Cloverdale Shell	418 Cloverdale Blvd.	Tank Leak	WRCB
Unocal Geysers	13025 Big Geysers	Three Tank Leak	WRCB
Pellegrini Service Station	206 Cloverdale Avenue	Tank Leak	WRCB
Cloverdale High School	509 Cloverdale Avenue	Tank Leak	WRCE
GASCO	330 Cloverdale Avenue	Tank Leak	WRCB
Jet Trucking	28181 Highway 1	Tank Leak	Sonoma County
Redwood Empire, Inc.	31401 McCray	Tank Leak	WRCB
A & M Enterprises	590 Santana	Tank Leak	WRCB

Continued on next page.

TABLE II (Cont.)

## IDENTIFIED HAZARDOUS WASTE SITES

SITE	ADDRESS	PROBLEM	IDENTIFY AGENCY
Cloverdale Ambulance Service	213 Main Street	Tank Leak	WRCB
Reuser, Inc.	370 Santana Drive	Tank Leak	WRCB
Washington Elementary School	129 Washington	Tank Leak	WRCB
Cloverdale Hospital District	211 N. Main Street	Tank Leak	WRCB
Cloverdale High School Bus Yard	97 School Street	Tank Leak	WRCB
Southern Pacific	Railroad & Mulberry	Tank Leak	WRCB
Louisiana Pacific	26800 Asti Road	Tank Leak	WRCB
MGM Brakes, Inc.	P.O. Box 425		DHS5
Masonite Corporation	Route 101		DHS5
Source:	County of Sonoma Public Health Department		



No proposals have been submitted to the State Department of Health Services (DHS) to site additional commercial facilities in Sonoma County. DHS records indicate that there are 26 onsite facilities in the county, most of which only store their wastes until they are shipped to a commercial facility.

In general, many offsite facilities that local generators have used in recent years, such as International Technology Corporation's Vine Hill/Baker and Panoche facilities in nearby Contra Costa and Solano Counties, have stopped accepting waste. New facilities are not being sited to replace them and expansions to existing facilities will not add enough capacity. Generators who manifest waste in Sonoma County are increasingly using commercial facilities located out-of-state or in Southern California to manage their wastes.

## FINDINGS

1. The City of Cloverdale with the exception of the southwestern portion of the City is classified as an area of low fire hazard risk. The hills of the south western portion of the study area are classified as an area of high to very high fire hazard risk.
2. Wildland fires remain a seasonal threat to the hillsides in the study area.
3. There are several active faults in the Bay Area region and locally in Sonoma County which may affect the City of Cloverdale should an earthquake occur.
4. The hillsides above the 400 foot contour elevation line in the study area to the west of the City are at risk of landslides.
5. Liquefaction potentials, both above and below the 400 foot contour elevation, are considered to be minimal and moderately low, respectively.
6. Topographical features shield the study area from bodies of water that may experience seiches or tsunamis.
7. The inundation area of Warm Springs Dam would not affect the study area.
8. Dam failure from Coyote Dam would affect that portion of the study area east of the railroad tracks.
9. Twenty-two public buildings in the City have been categorized as "Potentially Hazardous Buildings."
10. Encroachment on floodplains increases flood hazards. There is a need for a flood map that accurately reflects land elevations.

11. Twenty sites within or near the Study Area have been identified as hazardous waste sites.



## CONSERVATION/OPEN SPACE

### INTRODUCTION

The Conservation and Open Space section provides base data about natural resources present in the study area. Cloverdale's geothermal, mineral, soils, and agricultural resources will be examined.

### GEOTHERMAL RESOURCES

The State Public Resources Code defines geothermal resources as "the natural heat of the earth, the energy, in whatever form, below the surface of the earth present in, resulting from or created by, or which may be extracted from, such natural heat, and all minerals in solution or other products obtained from naturally heated fluids, brine, associated gases and steam, in whatever form, found below the surface of the earth . . . " (Section 6903)

Geothermal resources in Sonoma County consist of hot water, steam and heat found at or below the earth's surface. The Geysers geothermal area located approximately seven miles northeast of the study area is the largest steam-powered geothermal development in the world with 1,800 megawatts of electricity being generated in 1986. Hot water geothermal resources also exist in Dry Creek Valley and Alexander Valley, but exploration and utilization of these resources have been very limited. Exhibit 19 shows geothermally active areas near the study area. Currently, no geothermally active areas exist within the study area. (Sonoma County General Plan, 1989)

### MINERAL RESOURCES

Sonoma County has adopted the Aggregate Resources Management (ARM) Plan, a plan for obtaining future supplies of aggregate material. This plan serves as the state-mandated mineral management policy for the county and is intended to accomplish the mandated purposes. During the process of adoption of the plan, the County considered the aggregate resource areas subsequently classified as MRZ-2 by the State Geologist and transmitted by the Board in compliance with the Act in February, 1985. Exhibit 20 shows the areas considered MRZ-2 by the State. The resources found in the MRZ-2 zone near the study area consist mainly of sand and gravel pits along the Russian River either within the channel or on adjacent alluvial terraces. In the past mercury, magnetite, gravel manganese, and chromite have been profitably mined near the study area.







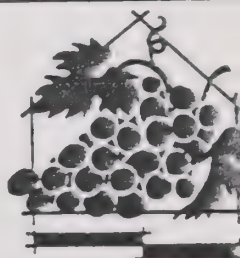
Source: Sonoma County General Plan

# ACTIVE GEOTHERMAL AREAS

## GENERAL PLAN

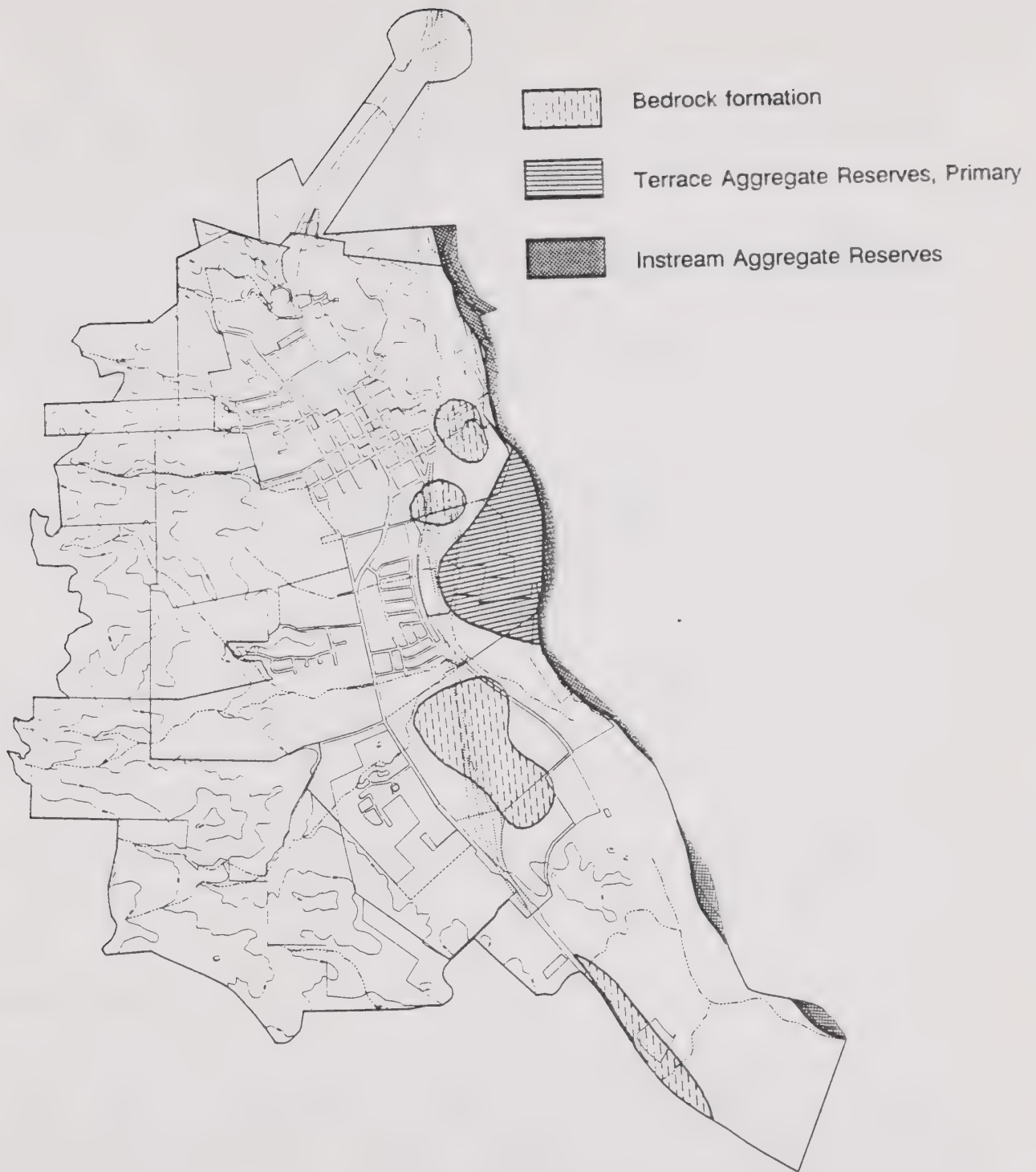
City of Cloverdale

19



no scale





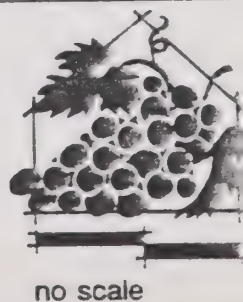
Source: Sonoma County

STATE RZM-2 ZONES

GENERAL PLAN

City of Cloverdale

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## SOILS

Valuable resources to Sonoma County are its soils and the agriculture supported by the various soils. The County has identified areas as agricultural preserves in order to protect the County's economy which is largely based on vineyards and other agriculture.

Soil is defined as earth surface material which has been so modified or acted upon by physical, chemical, or biological agents that it will support plant life. Characteristics such as depth, permeability, ability to hold water, and fertility, vary widely from place to place.

Soils analysis for planning is performed with two primary concerns: determination of soils suitable for agriculture or other resource uses, and soils constraints on residential development. (Sonoma County General Plan, 1989)

The majority of the soils found in the study are either in the Yolo-Cortina-Pleasanton soil association or the Hugo-Josephine-Laughlin soil association. Table JJ lists the characteristics associated with the soils common in the study area. The Yolo-Cortina-Pleasanton soils are found in the area surrounding the Russian River. The Hugo-Josephine-Laughlin soils are associated with the hills surrounding the river. Exhibit 21 shows the soil types in the study area.

The Yolo-Cortina-Pleasanton association also includes Arbuckle, Manzanita, Pajaro, Positas, and Zamora soil types. These soils are associated with flood plains, alluvial fans, and low terraces. The soils are very gravelly, sandy loams and clay loams that are well to excessively drained. Slopes range from 0 to 9 percent grade. Many of the soils in the association are considered prime agricultural soils.

The Hugo-Josephine-Laughlin association also includes Boomer, Hely, Maymen, Sikes, Suther, and Yorkville soil types. These soils are well drained loams and gravelly loams. They occur on slopes of 2 to 75 percent grade. They are associated with hillsides and mountains.

## AGRICULTURE

Agriculture, especially the cultivation of vineyards is a major activity in Sonoma County. The Yolo-Cortina-Pleasanton soils association located in the Alexander Valley area represent some of the most important soils in the county for farming as they are very fertile and well-drained. Rapid urban growth has produced pressures on agricultural lands that tend to discourage new agricultural investment and uses, raises the price of land making purchase for farming unrealistic, and increasing the likelihood of purchase for nonagricultural use. Competition occurs between urban and agricultural uses at the urban boundary.



TABLE JJ  
SOIL ASSOCIATION CHARACTERISTICS

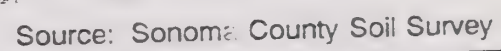
	Capability Class	Shrink/Swell <sup>1</sup> H M L	Erosion Haz. <sup>2</sup> VH H M S	Runoff Pot. <sup>3</sup> VR R M S	Hydro Group <sup>4</sup> A B C D	Septic Limit <sup>5</sup> S M L	Major Use
Yolo-Cortina Pleasanton Assn.	-	•		•	•	•	
Yolo Soils	I-II	• •	• •	• •	•	•	All Crops Grown in County
Cortina Soils	IV	•	•	•	•	•	
Pleasanton Soils	I-IV	• •	•	• •	•	•	
Hugo-Josephine-Laughlin Assn.	-	•				•	Commercial Timber on Hugo and Josephine Range and Past.
Hugo Soils	VI-VIII	•	• •	• •	•	•	
Josephine Soils	IV-VII	• •	• • •	• • •	•	•	
Laughlin Soils	IV-VII	•	• • • •	• • • •	•	•	

Source: Sonoma County General Plan, 1987

Notes: 1) H=High      2) VH = Very High      3) VR = Very Rapid      4) A = Absorbs water rapidly; low runoff potential      5) S = Severe  
M = Moderate      H = High      H = Rapid      B = Absorbs water moderately; moderate runoff potential      M = Moderate  
L = Low      M = Moderate      M = Moderate      C = Absorbs water slowly; moderate runoff potential      L = Low  
S = Slight      S = Slight







## 21



## SOILS LEGEND

- 1 Alluvial land, sandy
- 2 Clear Lake clay, 2 to 5 percent slopes
- 3 Clough Gravelly loam, 2 to 9 percent slopes
- 4 Clough gravelly loam, 15 to 30 percent slopes
- 5 Cole silt loam, 0 to 2 percent slopes
- 6 Cole clay loam, 0 to 2 percent slopes
- 7 Cortina very gravelly sandy loam, 0 to 2 percent slopes
- 8 Haire clay loam, 0 to 9 percent slopes
- 9 Henneke gravelly loam, 30 to 75 percent slopes, eroded
- 10 Hugo very gravelly loam, 30 to 50 percent slopes
- 11 Josephine loam, 9 to 30 percent slopes
- 12 Josephine loam, 30 to 50 percent slopes
- 13 Josephine loam, 50 to 75 percent slopes
- 14 Laughlin loam, 2 to 30 percent slopes
- 15 Laughlin loam, 30 to 50 percent slopes
- 16 Laughlin loam, 50 to 75 percent slopes
- 17 Los Gatos loam, 30 to 75 percent slopes
- 18 Manzanita gravelly silt loam, 0 to 9 percent slopes
- 19 Pajaro clay loam, overwash, 2 to 5 percent slopes
- 20 Positas gravelly loam, 0 to 9 percent slopes
- 21 Positas gravelly loam, 9 to 15 percent slopes
- 22 Riverwash
- 23 Rock land
- 24 Sobrante loam, 30 to 50 percent slopes
- 25 Yolo sandy loam, 0 to 2 percent slopes
- 26 Yolo sandy loam, overwash, 0 to 5 percent slopes
- 27 Yolo loam, 0 to 2 percent slopes
- 28 Yolo gravelly loam, 0 to 5 percent slopes
- 29 Yorkville-Laughlin complex, 30 to 50 percent slopes
- 30 Zamora silty clay loam, 2 to 5 percent
- 31 Los Robles gravelly clay loam, moderately deep, 0 to 5 percent slopes
- 32 Hygo very gravelly loam, 50 to 70 percent slopes
- 33 Suther loam, 30 to 50 percent slopes
- 34 Sobranto loam, 15 to 30 percent slopes



Per the Farmland Mapping and Monitoring Program, the State Office of Land Conservation monitors the conversion of the state's agricultural lands to and from agricultural use. According to the 1984 Advisory Guidelines, the maps "are intended to provide information only and do not constitute a state prescription for local land use decisions." The maps classify farmlands based on soil types and current land use. Exhibit 22 shows the 1986 Important Farmland map classifications for the study area.

The Farmland Mapping and Monitoring Program Advisory Guidelines define prime farmland (P - map symbol) as land which has the best combination of physical and chemical characteristics for the production of crops. Prime farmland must have been and for the production of irrigated crops within the last three years (Section 201).

Farmland of Statewide importance is land which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for the production of irrigated crops within the last three years (Section 202).

Unique Farmland (U - Map Symbol) is land that is used for the production of specific high economic value crops. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers (Section 203).

Farmland of Local Importance (L - Map Symbol) is either currently producing crops, or has the capability of production. The land may be important to the local economy due to its productivity.

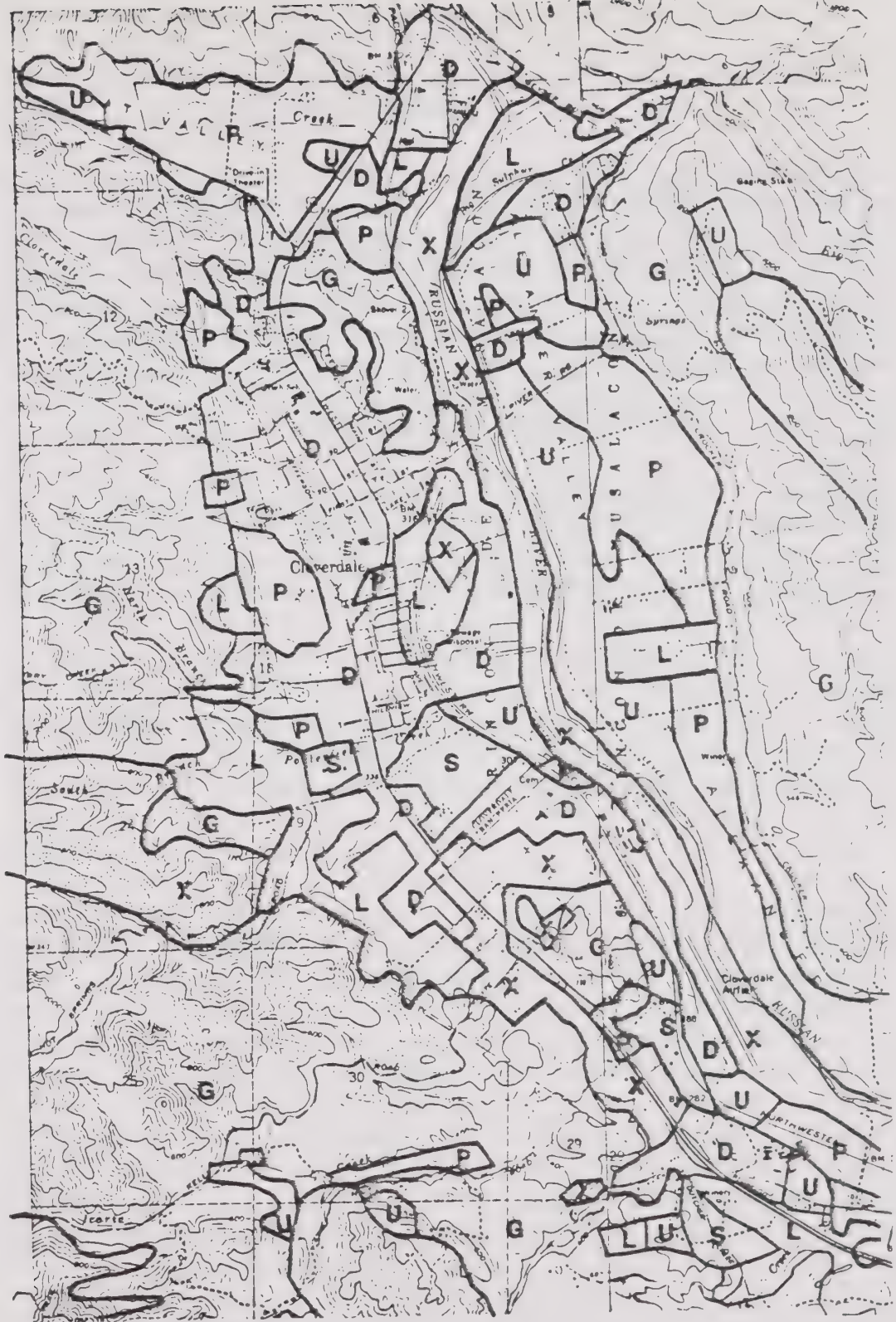
Grazing Land is land on which the existing vegetation is suited to the grazing of livestock. Much of the hillsides in the west of the study area are classified as Grazing Land.

Urban and built up land (D - map symbol) is land that is used for residential, industrial, commercial, construction, institutional, public administrative purposes, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. The minimum mapping unit is 10 acres. The building density must be at least one structure per 1.5 acres or approximately six structures per 10 acres (Section 206). Urban and built up land represents a major area of the City's incorporated limits.

Finally, land which does not meet the criteria of any other category is defined as Other Land (X - map symbol) on the map (Section 207). A majority of this property is located to the along the Russian River. Uses which may occur in these areas include rural development, marginal agricultural lands, and brush and timber lands.







Source: California Department of Conservation

# MAP OF IMPORTANT FARMLAND

## GENERAL PLAN

City of Cloverdale

22



no scale

## FARMLAND LEGEND

P

PRIME FARMLANDS

S

FARMLANDS OF STATEWIDE IMPORTANCE

U

UNIQUE FARMLANDS

L

FARMLANDS OF LOCAL IMPORTANCE

G

GRAZING LANDS

D

URBAN AND BUILT-UP LANDS

X

OTHER LANDS

## BIOLOGY

The study area has varied topography, ranging from the Russian River floodplain and its fault terraces in the east, to rolling hills and relatively steep drainage canyons in the west. The area has had a long history of use and disturbance to the biotic communities. Early livestock grazing and the invasion by non-native plants has almost completely altered the open grasslands, as well as having resulted in at least some clearing of natural woody cover for conversion to additional pasture, crops, and/or orchards. Substantial oak woodland remains, but this community has been effected by grazing (altered grassland understory, reduced tree regeneration), tree cutting (firewood, clearing for pasture and other agriculture), and more intensive uses around homes and ranches.

Local development for residential and commercial endeavors (streets, building, parking lots, etc.) has involved further vegetation clearing especially on the flat areas adjacent to the Russian River, and planted and escaped landscaping has resulted in a considerable amount of additional displacement of native species.

The study area is located at the northern end of the series of valleys and low plains that join the Russian River, habitats which further south are known to support extensive vernal pool and other seasonal wetland habitats and several plant species of concern. Cloverdale itself is not known to contain any extensive vernal pools, but this area does have some seasonal wetlands and could support almost any of the regionally known species of concern.

### General Vegetation

Much of the natural vegetation of the overall study area has been either completely removed or severely degraded. As is typical of most of California, the Cloverdale region has experienced a drastic decline in native grassland (converted to an often weedy annual type). The area has sustained local losses of riparian and oak woodlands and has altered what few seasonal wetlands remain. The primary natural plant communities that remain are the various species mixes of oak woodland and some scattered brush (chaparral and scrub).

A potential issue with regard to general vegetation is the loss of substantial acreage of remaining vegetation and the associated habitat for wildlife. The main conflict is one of available space. The more conversion of natural or even semi-natural terrain into built-out landscaped neighborhoods means less space and resources available to wildlife. The number and diversity of animal species also declines.

While most of the locally occurring plant communities are relatively common in the region, such communities as native grassland, riparian and other wetlands, and to some degree oak woodland have been increasingly degraded and/or depleted and are becoming of greater concern as valuable natural amenities for local towns. The following are brief descriptions of the study area's existing plant communities, their values, and the associated potential conflicts that could arise pending specific development plans.



## Grassland

Local grassland are typical of those throughout the region and are predominantly annual in character, being composed by any number of introduced grasses (Avena, Bromus, Lolium, Cynosurus, Hordeum), weeds (Brassica, Erodium, Centaurea, Carduus, Eremocarpus, Plantago, etc.) and occasional natives. The study area does support many native grasses (Stipa pulchra and lepidula, Danthonia, Deschampsia, Elymus, Festuca, Sitanion, Poa, Agrostis, Melica, Hordeum) and associated wildflowers (Brodiaea, Clarkia, Calochortus, Lupinus, Nemophila, Hemizonia, Lasthenia, Orthocarpus), but rarely are they dominant. The most suitable places for remnant pockets of more natural grassland vegetation are in the openings within large woodland communities.

Herbaceous seeps and springs, wet meadows, and other isolated herbaceous wetlands are not common but are important habitats for both plants and animals, are geographically limited, and have historically been depleted and/or degraded. Wetland habitats, whether composed of natives (Juncus, Carex, Scirpus, Typha, Epilobium, Mimulus) or exotic (Paspalum, Polygonum, Cyperus, Polypogon, Rumex) are highly productive and many are protected by policies and regulation at both state and federal levels.

Grasslands are probably the most threatened by future development since they are typically on less steep slopes and are close to the logical areas of expansion. In general, grassland habitats are not regarded as a significant constraint to development, but they do need to be examined closely on a site by site basis to determine whether or not any wetland could be affected.

## Brush

Brush is not abundant in the study area, but is represented by small stands and some sizable areas on exposed, south-facing ridges. The patches of brush vary in species ranging from typical chaparral or manzanita, ceanothus, chamise, etc. on hot dry, steep and rocky slopes, to a slightly more mesic coastal scrub community of bush monkeyflower, coffeeberry, poison oak, toyon, manzanita, coyote bush, and California sagebrush. Because of its relatively dry, inland setting, the study area's brush is dominated by chaparral vegetation. Brush communities, while not especially valuable alone as habitat for wildlife, do provide substantial habitat value as small pockets within an overall woodland and grassland matrix, in addition to often being the best cover for erosion control and watershed protection on steep and/or rock sites. Chaparral is also a known community for a few sensitive species such as Rincon Ridge ceanothus (Ceanothus confusus), Rincon Ridge manzanita (Arctostaphylos stanfordiana var. repens), and Sonoma manzanita (Arctostaphylos canescens ssp. sonomensis).

## Woodland and Forest

Much of the currently undeveloped and uncultivated land in the study area, primarily in the western third, supports extensive oak woodland composed of varying proportions of coast live oak, blue oak, California black oak, valley oak, interior live oak, and Oregon white oak. On north slopes, in the small drainage canyons and on other protected sites, the oaks are mixed with California bay, madrone, Douglas-fir, and buckeye. The frier south slopes and small valleys are typically dominated by blue and live oaks, with occasional valley oak.

The river floodplain supports some remnant oak stands and disjunct groves away from the main riparian corridor. Most of the main floodplain and adjacent terraces have been developed and/or cultivated to the point that the remaining oaks are mainly scattered small stands, fragmented from the larger expanses along the river and in the hills to the west, and surrounded by human and agricultural activities. The woodland itself is not particularly species rich or structurally diverse, but it is valuable for its food production, nesting sites, and general cover.

## Riparian and Other Wetlands

Wetlands in the study area include the riparian woodland and thickets along the Russian River, most drainageways and canyonbottoms, and many isolated low and poorly drained places on and around the valley floor. True riparian vegetation is restricted mainly to the Russian River. There are scattered strips along the larger tributary creeks. Most of the tributary drainages are ephemeral and support only a few riparian trees such as cottonwood, willow, and ash, within the overall woodland that dominates both the upland slopes and many creekbanks.

Legally defined "wetlands" and related "waters of the U.S." as defined and regulated by the U.S. Army Corps of Engineers (CE) are not extensive aside from the Russian River floodway. Others include most ephemeral creekbeds, small hillside seeps, and a few scattered seasonal pools in undeveloped level areas. All of the Russian River floodway and most adjoining riparian woodland or thicket would be subject to CE jurisdiction.

## Sensitive Features

Sensitive features present in the study area include the main riparian corridor along the Russian River (including the river, its bank vegetation, and frequently flooded portions of the adjacent floodplain), the wooded tributary corridors that feed to the Russian River from the west, and the scattered wetlands in the grassland communities. The plant communities are relatively common and only the riparian areas represent vegetation of high concern. Oak woodland is valuable and worthy of protection, but is not currently under formal protection under state or local laws.



There are no known sensitive plant or animal species present in the study area (California Natural Diversity Data Base [CNDDDB] 1990) nor is there any designated critical habitat for such species. Several plant species of secondary concern could be present in the study area, but they do not pose major constraints on land use.

Surveys should be conducted at the appropriate time(s) of year. Species that may be found that are on List 1 of the California Native Plant Society's (CDPS) rare plant inventory (Smith and Berg 1988) should be afforded protection or at least a detained mitigation effort subject to the review and approval of the California Department of Fish and Game (CDFG).

The study area is not known to support any wildlife species that are officially listed at either the state or federal level, although there are several of secondary concern. These include the pallid bat, several owls, hawks, and other raptors, and possibly several waterbirds and/or species of waterfowl that might use the Russian river corridor. Such species as golden and bald eagles, black-shouldered kite, northern harrier may use parts of the study area on occasion, but would not be expected to reside or visit the area on a regular or significant basis. Most of the sensitive animal species that might use the study area are most likely not residents, but are species that would utilize certain resources in it temporarily or on occasion during annual movements.

## CULTURAL RESOURCES

Concern about cultural resources in the Cloverdale area dates back to the early days of CEQA mandated EIR's. In 1978 the City of Cloverdale General Plan EIR summarized the knowledge of the archaeological records then in the possession of Sonoma State College. The college was not yet the designated State Historic Preservation Office Archaeological Inventory, but did possess the most extensive archaeological records of the area. At the time of the 1978 report only 1,430 acres in Cloverdale were being considered for development.

According to the 1978 report there were no cultural resources recorded inside the general plan study area and the only areas suspected of containing archaeological sites were along the banks of the Russian River. In particular, the western bank had at least four ethnographically recorded locations of Pomo villages. Noting that only three archaeological reports had been done for the area by that date, the 1978 report went on to speculate that unknown amounts of damage would be done to cultural resources and that archaeological surveys should be done on a project by project basis.

The general plan information was based upon a letter from the Anthropological Studies Laboratory at Sonoma State dated March 16, 1976. Addressed to Mr. Ron Dering of the Sonoma County Planning Department, Ms. Wendy Van Dusen of the Center went on to speculate that the Cloverdale area, regardless of the lack of recorded sites, had to be considered highly sensitive in terms of archaeological sites. This judgement was based primarily on the finding up to that time at the nearby Warm Springs Dam Project Area, where a total of 90 archaeological sites had been found. Additionally a total of 130

archaeological sites were found in the opposite direction at the geothermal development area to the east of the city. The assumption was that Cloverdale, being situated in a similar environment, would also have high numbers of archaeological resources.

Between 1978 and the present the City of Cloverdale did proceed to have the city inspected by archaeologists on a case by case basis, with the number of field investigations increasing dramatically along with the pace of development in the 1980's. Project review done by the Archaeological Inventory located at Sonoma State University resulted in a total of 23 reports on archaeological surveys. Typical of the type of development happening in the city, most of these studies were done for parcels averaging 10 acres in size. Two of them were lineal studies, one for a water system, and the others for the yet to be constructed Highway 101 bypass.

It appears that of all the recorded archaeological and historic sites known for the area, 11 in number, the M.P. Rosen project (later Stonehenge) was responsible for the discovery of four of the 11 sites. Three of the remaining sites were recorded during a lineal survey which follows the corridor of the Northwestern Pacific Railway from the north end to the south end of town. This work was evidently done for the proposed 101 bypass. The National Register of Historic Places through 1985 lists an additional two locations: these are the Cloverdale Railroad Station and the Simon Pinschower House at 302 North Main Street.

It is estimated that less than 20 percent of the Cloverdale area has been subjected to systematic inspection for cultural resources to date (Miley P. Holman). Of the 23 recorded surveys, 6 of these were responsible for recording the 11 sites known about to date. Four of these are historic: the remains of a winery and a stone house were found on the Stonehenge property, a standing 1870's farmhouse was found on another parcel and a combined historic structure (the Asti cookhouse) and prehistoric site (some flake scatter) was found on the Asti property south of town.

A total of seven prehistoric sites have been recorded inside the city borders. All defined as either flake scatters or flake scatters containing visible midden, only two of these locations have had further archaeological research done on them to help determine their constituents. Additional information has been received by individuals familiar with the area about the locations of two additional prehistoric sites (a flake scatter and a possible midden area), a petroglyph site (incised stone art), and a complex of historic foundations. None of these locations have been visited recently, and none of the sites have been registered with the State Historic Preservation Office.

## Issues

Based upon the discovery of 11 archaeological sites inside the City, with only six survey areas representing less than 10 percent of the area of the City of Cloverdale, the 1976 assumption by Sonoma State College that the area should be considered highly sensitive has been born out by the facts. As further work is done in the area, the density of both prehistoric and



historic sites will probably increase. Field inspections, in conjunction with environmental analysis for development and road improvement, have turned up resources throughout the city area, not just along the western bank of the Russian River where they were expected.

### **Prehistoric Resources**

The city should continue the process of having the California Archaeological review applications on a case by case basis, and if they are not doing so, should consider having this review done for agricultural conversions as well. The conversion of fallow land into vineyards can cause destruction to fragile archaeological resources, in particular the flake scatters described in this section. Flake scatters consist of utilized or un-utilized stone materials scattered on the surface of the ground and any disturbance to such as area results in the complete destruction of the resource. Preparation of areas for planting of grapes can cause large scale grading and re-contouring, such as that which is being done south of town in the Asti area presently.

### **Historic Resources**

Attempts should be made to augment the historic resources presently in the possession of the California Inventory. Other than the sparse listing on the National Register of Historic Places and some archival information (such as the Thompson 1977 Historical Atlas Map of Sonoma County, California), little information exists about the locations of either standing historic structures or the locations of former historic structures. Lists could be generated of locally important structures and locations utilizing local informants and additional archival information to assist the Planning Department in determining the need for additional cultural resources research in development areas whether or not the areas have been designated as sensitive by the California Archaeological Inventory. This additional data base would be extremely valuable in identifying and mitigating impacts to areas where agricultural conversions are to take place.

Another area of concern which should be addressed by the City of Cloverdale is if development continues to the north and west into the hill areas where historic alteration or use of the land has been kept to a minimum. Some of these areas may contain areas utilized by the present Pomo population for the gathering of foods or materials utilized for basket-making or for medicinal purposes.

In the course of having the Warm Springs Dam area inspected, the Army Corps of Engineers consulted with the local Pomo community and discovered that there were a number of locations inside the proposed dam area which were frequented by the Indians. Both CEQA and NEPA legislation address the potential significance of such resources and require mitigation of impacts to them. In the case of Warm Springs, many of the resource areas were reconstructed outside of the flood zone to allow their continued utilization. Rather than require research on a case by case basis, the City of Cloverdale could consider

conducting a regional study of those areas where historic alteration has been kept to a minimum to locate any suspected resource areas and to plan for their protection.

#### **FINDINGS:**

1. The Geysers area is one of the largest geothermal developments in the world. The study area is in an area that contains unexplored hot water geothermal resources.
2. Sand and gravel are the only important mineral resources identified in the study area.
3. The soils in the Yolo-Cortina-Pleasanton association are considered some of the best agricultural soils in the County.
4. The Study Area contains different grades of farmland including Prime Farmland. Development has taken place on areas previously characterized as Unique Farmland and Farmland of Local Importance. The City will continue to allow development within its incorporated limits in support of the County agricultural preserve and zoning.
5. There is one biotic feature of high importance and potential constraint, this being the Russian River corridor. This area should be avoided to the extent possible and a reasonable effort to restore portions would be a worthwhile goal.
6. While the plant assemblages present are relatively common, some of the wet habitats are generically restricted and very valuable, and represent sensitive habitats worthy of preservation or detailed mitigation.
7. Cloverdale has several species of oak trees. No tree replacement or compensation program exists.
8. Less than 20 percent of the study area has been subjected to systematic inspection for cultural resources.
9. There are 11 known archaeological sites in the study area.
10. Conversion of the fallow land to agriculture or other uses can result in the destruction of archaeological resources.
11. The Hills areas to the north and west of the City are used for gathering of foods and materials by the Pomo Indians.

# RECREATION

## INTRODUCTION

Recreation opportunities in Cloverdale are of a regional nature. Thus the region is the area of analysis for this section of the MEA. Information on recreation was gathered from the Army Corp of Engineers, Cloverdale Planning Department, and Sonoma Parks Department. The Sonoma Valley and the City of Cloverdale provide a variety of recreational activities. Table KK provides names and locations of the recreation facilities available in and around the City of Cloverdale.

### Regional Active Recreation

People wanting to go hiking, camping, or fishing can go to Warm Springs Dam on Lake Sonoma. Lake Sonoma is five miles southwest of Cloverdale. Lake Sonoma is surrounded by 17,000 acres of wilderness and recreation areas and contains approximately 40 miles of paths for hiking and horse back riding. Yorty Creek and Warm Springs Dam recreational areas and other facilities on Lake Sonoma also offer sailing, fishing, waterskiing, swimming, and camping.

### Regional Passive Recreation

Cloverdale is at the northern end of the Sonoma Valley Wine Country in the Alexander Valley viticulture area. There are 12 local wineries, most of which are open daily for wine tasting. The wineries are: Asti, Bandiera, Ferrari-Corano, Geyser Peak, J. Fritz, Lake Sonoma, Lyeth Vineyards, The Meeker Winery, Pat Paulsen Vineyards, J. Pedroncelli, Preston Vineyards, and Weinstock Cellars. The surrounding Sonoma Valley contains over one hundred other wineries.

### City of Cloverdale

The City of Cloverdale currently maintains two public parks. City Park is a 7.5 acre area that contains playgrounds and picnic areas. Tarman Park is approximately .25 acres in size and contains picnic facilities.

Land owned by the Cloverdale Unified School District is used as community recreational activities when school is not in session. The District maintains open space around Jefferson and Washington elementary schools, Cloverdale High School, and at the District offices. Community soccer is played at Washington School. Little League baseball and slow pitch softball leagues use the facilities at Jefferson School and Cloverdale High School. Playground facilities at these sites are not open for community use.

TABLE KK  
RECREATIONAL OPPORTUNITIES

RECREATION	LOCATION
Campgrounds	Lake Sonoma Recreational Area
Hiking	Lake Sonoma Recreational Area
Horseback Riding	Lake Sonoma Recreational Area
Picnicking	City Park, Cloverdale Tarman Park, Cloverdale Yorty Creek, Lake Sonoma Warm Springs Dam, Lake Sonoma
Swimming	Yorty Creek Recreation Area, Lake Sonoma
Playground	City Park, Cloverdale Tarman Park, Cloverdale
Soccer Facilities	Washington Elementary School, Cloverdale
Baseball Diamonds	Jefferson Elementary School, Cloverdale Cloverdale High School
Source:	STA Planning, Inc.



## Parkland Advisory Committee Findings

In the 1978 General Plan seven areas in the City were designated for future development or expansion as parks or recreation areas. These plans are currently being re-evaluated by the Parkland Advisory Committee. This committee was formed in September 1988.

The Parkland Advisory Committee found the parkland standard of five acres per 1,000 Cloverdale citizens to be adequate to meet the City's needs. The City does not currently meet the parkland standard. The City has 7.6 acres of parkland serving approximately 5,000 residents or 1.52 acres per 1,000 residents. The committee determined that the specific needs for specific uses of parkland fall into the following categories: children's play equipment, field play areas, open space recreation, court games, parking facilities, a Community Center and administrative facilities. Table LL shows the breakdown of the five acres per 1,000 citizens standard into the above specific uses. The committee used these standards to determine the current need for specific recreational facilities within the City. Table MM shows these needs.

The General Plan calls for development of Wright Park, Landmark Visitor Park, Tarman Park, Porterfield Creek Community Park, City Park, regional parks, and City-wide pedestrian/bicycle trails to serve the needs of Cloverdale. Areas in which Regional Parks have been considered include City Airport and Rolando properties. Exhibit 23 shows the location of all proposed parks and recreation sites.

The Parkland Advisory Committee gives high priority to the development of Wright Park, Tarman Park Expansion, City Park Expansion, Potterfield Creek Community Park, and City-Wide Trails. Current sources of funding for these future park projects will come from parkland dedication fees, and the City of Cloverdale Recreation Trust Fund. Other sources of funding that have been examined include Community Parkland Act Funds, Trails Grant Program, Per Capita Grant Program, Roberti-Z'berg-Harris Urban Open Space Grant Program, and the Transportation Development Act. Funds could also be obtained through a Recreation Assessment District, Revenue or General Obligation Bond Measure or user fees.

## FINDINGS

1. The City of Cloverdale is committed to expanding the park facilities and services for its residents.
2. Funding sources are being sought for the expansion of parks and recreation.

TABLE LL  
PARKLAND USAGE BREAKDOWN

PARKLAND USE	ACRES/1,000 POPULATION
Children's Play Equipment	0.5
Children/Adult Field Sports and Field Play	2.0
Open Space Recreation	1.25
Court Games	0.3
Parking Facilities	0.75
Community Center and Administration	<u>0.2</u>
Total	5.00

Source: Findings and Recommendations of the Parkland Advisory Committee, March 21, 1990

TABLE MM  
PARKLAND NEED ANALYSIS

ACTIVITY	EXISTING <sup>1</sup>	5/1000 GOAL <sup>2</sup>	DEFICIT
Children's Play Equipment	0.5 acres	2.5 acres	2.0 acres
Children/Adult Field Sports	5.2	10.0	4.8
Open Space Recreation	0.5	6.25	5.75
Court Games	1.2	1.5	0.3
Parking	0.3	3.75	3.45
Community Center/Admin.	<u>0.1</u>	<u>0.5</u>	<u>0.4</u>
Total	7.6	25.0	16.7

Source: Parkland Advisory Committee Report and STA Planning, Inc.

<sup>1</sup>Represents existing acreage for the area within current City limits.

<sup>2</sup>5 acres per 1,000 population criteria.



# REVISED STUDY AREA MAP AND ANALYSIS

## INTRODUCTION

Subsequent to September 1990 when the MEA was first submitted to the City of Cloverdale, and MEA findings were presented to the public at a workshop, the Cloverdale General Plan Update study area was slightly revised. Please refer to Exhibit 24. Areas A, B, and C were added since portions of the parcels were already included in the previous study area map.

The additions of these areas do not affect the conclusions of the MEA. An analysis of the areas in relation to each environmental topic of the MEA is provided below. Exhibit 25 indicates the additional areas studied.

Area D was revised slightly to only indicate the inclusion of the northern interchange. The larger area around the interchange that was shown previously is not indicated on the Revised MEA Study Area Map.

## LAND USE

Area A is under operation principally as a lumber yard. Two small areas near Highway 101 are residential. Existing uses on Area B include a vineyard. Additional property in Area C is vacant/open space.

## ECONOMIC

The fiscal and market analyses are not parcel specific in focus. The addition of Areas A, B, and C does not affect the conclusions of the report.

## HOUSING

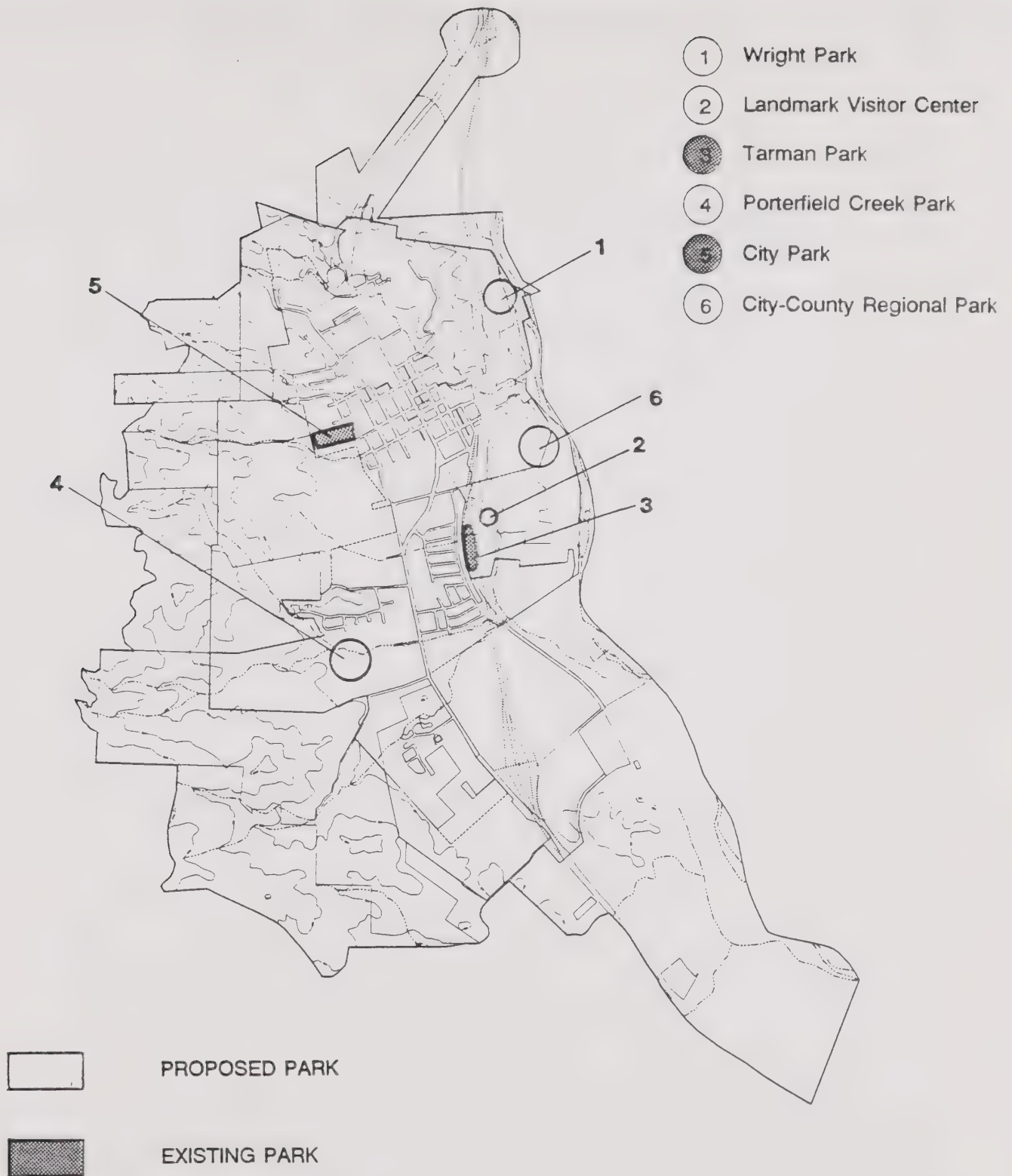
The Housing section focuses on housing opportunities and constraints generally within the City limits. Data is derived from Census tracts within the City limits and the Department of Finance which report statistics for incorporated property in Cloverdale. Areas A, B, and C lie in unincorporated property under the jurisdiction of Sonoma County. The addition of Areas A, B, and C does not affect this analysis.

## TRANSPORTATION AND CIRCULATION

Existing traffic counts were obtained at ten different locations by machine counts. Traffic generated by Areas A, B, and C would have been included in the analysis. The addition of the three areas does not change the conclusions of this section.







Source: STA Planning, Inc.

# EXISTING AND PROPOSED PARKS

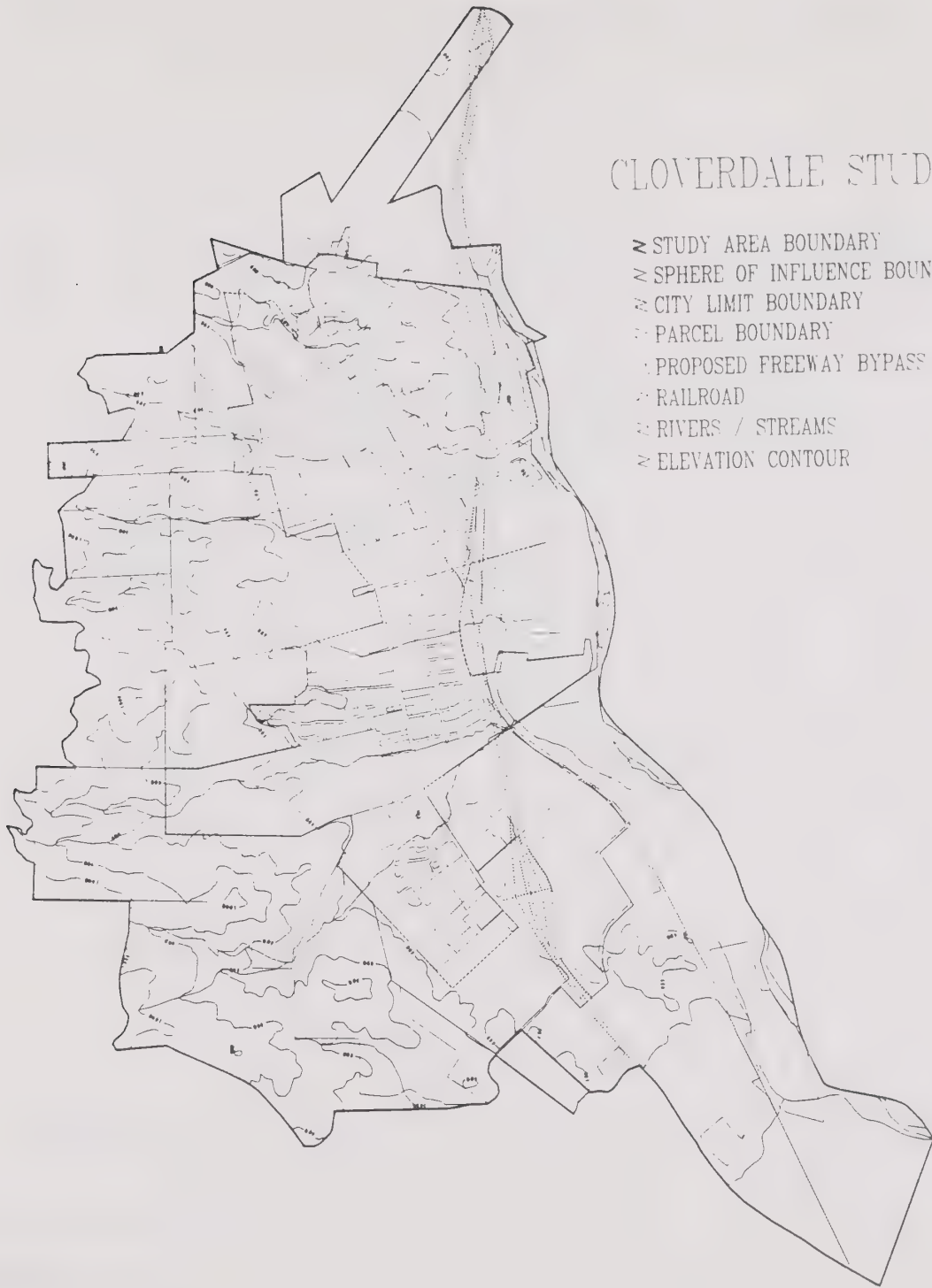
## GENERAL PLAN

City of Cloverdale

23







## CLOVERDALE STUDY AREA

- ≡ STUDY AREA BOUNDARY
- ≡ SPHERE OF INFLUENCE BOUNDARY
- ≡ CITY LIMIT BOUNDARY
- ≡ PARCEL BOUNDARY
- ≡ PROPOSED FREEWAY BYPASS
- ≡ RAILROAD
- ≡ RIVERS / STREAMS
- ≡ ELEVATION CONTOUR

## REVISED MEA STUDY AREA ANALYSIS

### GENERAL PLAN

City of Cloverdale

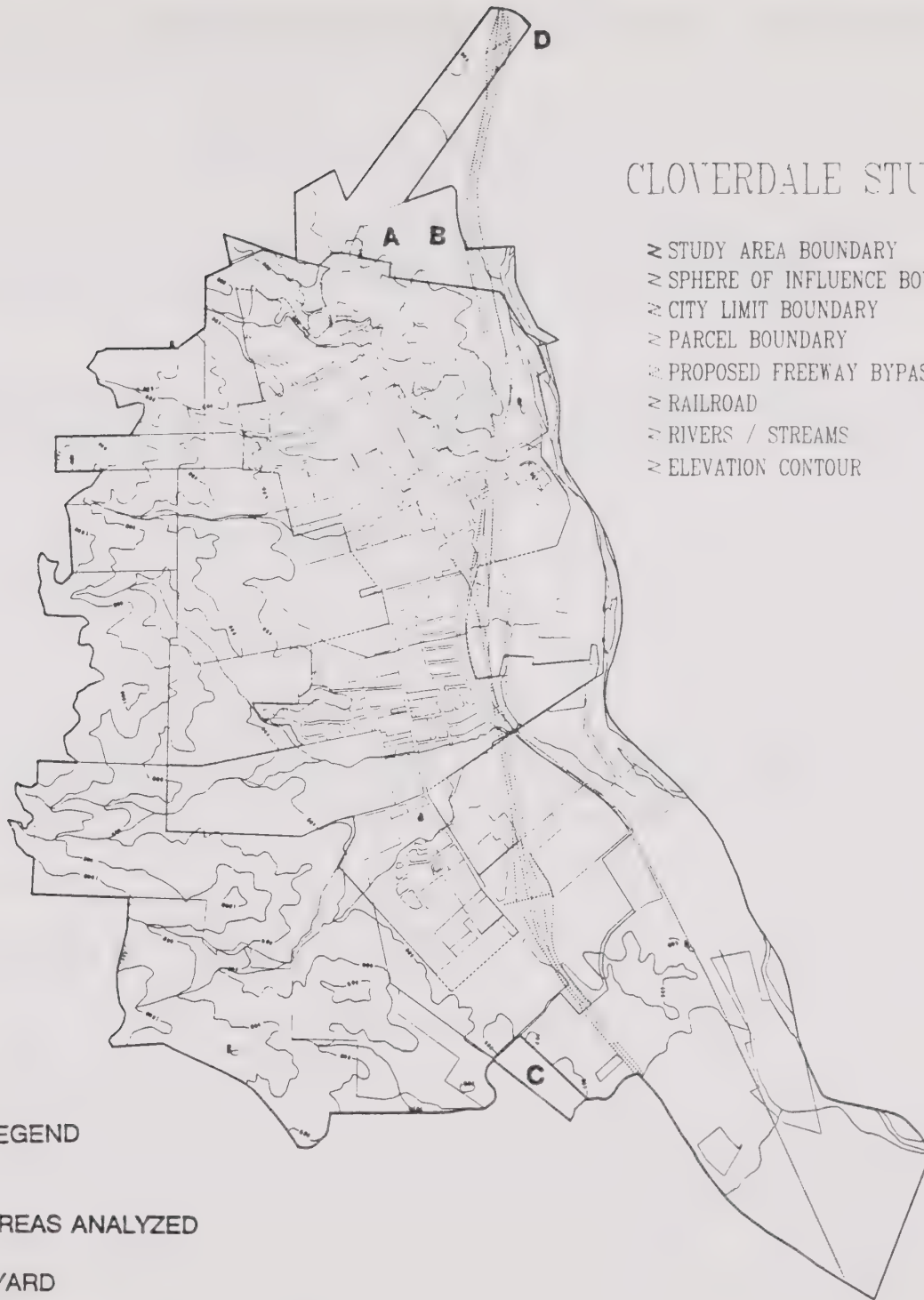
24



no scale







## CLOVERDALE STUDY AREA

- ≧ STUDY AREA BOUNDARY
- ≧ SPHERE OF INFLUENCE BOUNDARY
- ≧ CITY LIMIT BOUNDARY
- ≧ PARCEL BOUNDARY
- ≧ PROPOSED FREEWAY BYPASS
- ≧ RAILROAD
- ≧ RIVERS / STREAMS
- ≧ ELEVATION CONTOUR

### LEGEND

#### ADDITIONAL AREAS ANALYZED

- A = LUMBER YARD
- B = VINEYARD
- C = OPEN SPACE/VACANT

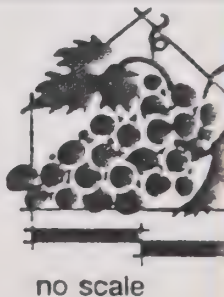
REFER TO TEXT FOR ADDITIONAL ANALYSIS.

Source: STA Planning, Inc

## ADDITIONAL PARCEL ANALYSIS

**GENERAL PLAN**  
City of Cloverdale

25





## PUBLIC SERVICES AND UTILITIES

Since portions of Areas A, B, and C were included in the previous base map, no changes are anticipated for the conclusions of this MEA section.

The section focuses on the current level of service provided to the Study Area. The addition of the properties does not change the analysis of service areas and staffing.

## NOISE

The discussion of noise levels along Cloverdale Boulevard/Highway 101 north and south applies to Areas A and B. The areas are affected by noise levels of up to 70 dBA. Please refer to Exhibit 13.

Area C has noise levels under 60 dBA.

## HEALTH AND SAFETY

### Fire Hazards

Areas A and B are not located in a high fire hazard area as indicated Exhibit 15. Area C includes steeper slopes and more vegetation. It is located within an area of very high or high potential for wildland fires. Please refer to the Fire Hazards section for more detail.

### Seismic Hazards

#### Surface Faulting

All three areas are subject to the effect of earthquakes.

#### Ground Failure/Soil Stability

Area C includes property located above the 400 foot contour line. Such areas are at risk for landslides. Please also refer to Exhibit 17. Areas A and B do not contain areas of elevation above 400 feet.

#### Liquefaction

Areas A and B are within an area considered at potential for liquefaction. Alluvial deposits are relatively shallow and liquefaction hazards within this area are considered to be moderately low. Please refer to the discussion of liquefaction in the Health and Safety section.



## **Tsunamis/Seiche**

The Study Area is shielded by topography from these hazards. The inclusion of Areas A, B, and C do not affect the conclusions of this analysis.

## **Dam Failure**

None of the areas are located east of the railroad tracks. Areas east of the railroad tracks could be affected by inundation from a failure of Coyote Dam.

## **Unreinforced Masonry Buildings**

Areas A, B, and C are not located within the City limits. A survey of URM buildings has been completed within the City limits in accordance with State law.

## **Hydrology/Flooding**

Areas A, B, and C are not located within areas subject to flooding by a 100-year event.

## **Hazardous Waste**

No change to the conclusions of this analysis are necessary with the inclusion of Areas A, B, and C.

## **CONSERVATION/OPEN SPACE**

Discussion of geothermal resources and mineral resources does not change with the inclusion of Areas A, B, and C.

Areas A and B include Yolo Sandy Loam (0-5% slopes) type of soils. Area C contains Laughlin loam soils (30-50% slopes). Please refer to Exhibit 21.

Areas A and B contain soils categorized as Prime Farmland and Grazing Lands. Area C is categorized with Grazing Land. Please refer to Exhibit 22.

The addition of Areas A, B, and C do not change the conclusions of the biological or cultural resources analyses.

## **RECREATION**

The addition of Areas A, B, and C do not affect the conclusions of the Recreation section in the MEA.

## REPORT PREPARATION RESOURCES

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## **APPENDIX A**

### **GENERAL PLAN UPDATE ISSUES AND OPTIONS PAPER**



# CLOVERDALE GENERAL PLAN UPDATE

September 1990

## PRELIMINARY ASSUMPTIONS AND ISSUES IDENTIFICATION

### Introduction

The City Council has directed the Planning Department to prepare an update to the existing Cloverdale General Plan which was first adopted in 1978. As the beginning step, the assumptions and planning issues facing Cloverdale must be identified. An "assumption" is a statement that reflects a given attitude that the community has toward physical development in the future. These assumptions will strongly influence the City's selection of its planning goals and the direction of the general plan. An "issue" is defined as an important unsettled community problem that is associated with the City's physical development.

Presented below is a list of assumptions prepared by STA. These assumptions serve to guide preparation of the general plan and provide a preliminary list of issues organized by each of the elements of the general plan. The assumptions and issues are presented to the public, Advisory Committee, Planning Commission and City Council so that we may reach a consensus as to the important problems the City faces over the next twenty years. With this guidance the data collection and analysis process can begin for the general plan update. This will lead to the end product: An updated general plan with goals, objectives, policies, and action plans designed to solve the problems we have identified.

The issues presented in this document were largely derived from the General Plan Advisory Committee, the Sonoma County General Plan, preliminary environmental analysis, Cloverdale Citizens Survey, and the 1978 Cloverdale General Plan.

These assumptions and issues will be refined, amended, added to, or even deleted as more and better information becomes available. The precise wording of each issue is not so important as getting the idea across. Remember, these issues are within the context of a 20-year time horizon. We ask that you review the list and make your own notes, changes and additions and then let your representatives on the Planning Commission, Council or the Planning Department see what you have accomplished.

### Assumptions

1. The quality of life that Cloverdale offers as encompassed in its friendly, rural, small town atmosphere must be maintained and enriched.
2. Cloverdale's distinctive and quality natural environment shall be conserved.



3. Establish a diverse economy that creates stable jobs for local residents, but does not despoil the environment or stress the City's infrastructure.
4. Set ultimate population levels and manage population growth to ensure that it does not create adverse impacts to the City's infrastructure, community services, fiscal resources, natural environment and quality of life.
5. Provide a jobs and housing relationship that satisfies local need for housing types and affordability.
6. Preserve and enhance the historic character of Cloverdale.
7. Respect the County's agriculture preserve policies for its productive lands and allow for compatible agricultural uses for rural residential lands within the City limits.
8. The Cloverdale General Plan shall address locally relevant physical, social and economic planning issues through the year 2010.
9. State, Regional and County planning issues and activities shall be addressed in the Cloverdale General Plan as they relate to local issues of concern.

### LAND USE ELEMENT

The Land Use Element designates the general distribution and intensity of uses of the land for housing, business, industry, open space, education, public buildings and grounds, waste disposal facilities, and other categories of public and private uses.

#### State Mandated Issues:

- Distribution of housing, business, and industry;
- Distribution of open space, including agricultural land;
- Distribution of mineral resources and provisions for their availability; c o n t i n u e d
- Distribution of recreation facilities and opportunities;
- Location of educational facilities;
- Location of public buildings and grounds;
- Location of future solid and liquid waste facilities;

- Identification of areas subject to flooding;and,
- Identification of existing Timberland Preserve Zone lands.

#### Local Issues:

#### Environment/Open Space/Agriculture:

1. Certain areas are environmentally sensitive, i.e., riparian corridors, and hillside areas which help give Cloverdale its unique character. Specific policies must be made to protect them from diminishment.
2. There are increased pressures to develop the hillside areas of Cloverdale. What measures are needed to insure slope stability, soil erosion, viewsheds are retained, and vegetation and wildlife communities are minimally impacted?
3. There is need for planning mechanisms that insure that high density development does not adversely impact adjacent uses with a lower intensity development.
4. County lands used for agricultural purposes should be maintained for such purposes.
5. Landscaping is not required by code for commercial development. Should it be prescribed?
6. The City has two major entrances from the regional road network. The appearance of these entrances gives an important first impression of the City. How can these areas be designed, and developed to enhance the image of Cloverdale?
7. There is need for an abatement program to rid the town of unsightly junk, weeds, abandoned autos that detract from the image of the community.
8. New growth must respect environmental systems and not detract from the small town atmosphere.
9. Should there be a scenic highway designation for Hwy 101?
10. Development, both residential and commercial, will result in loss of open space and agricultural lands.
11. Open space should be managed in an orderly manner.

12. View corridors, scenic highways, or areas between neighborhoods or uses of difference intensity should be transitioned appropriately.
13. The City's flood plain map may not reflect actual flooding and needs to be revised.

#### Historic:

1. Cloverdale still retains its historical character although it is being slowly diminished by attrition and new development that is out of character.
2. With new development occurring the possibility exists that it may conflict with the historical buildings. Is there need for design or architecture review. Should growth be aesthetically controlled?

#### Population/Growth Management:

1. What should be the ultimate population of Cloverdale at the end of a 20 year time horizon or at full build out of the plan?

#### Infrastructure:

1. New development receives approval before needed improvements to existing infrastructure (sewer and water) are in place. Sometimes it uses up the system reserve.
2. The sewer treatment plant creates odors which is bothersome to adjacent users and may limit uses.

#### Public Buildings and Services:

1. The City has two water sources in the City: a water plant at 590 E. 1st Street and the Furber Reservoir. These areas should be managed to protect the long-term viability of these water sources. Other uses in these areas may be considered to promote public use and enjoyment.
2. There is need for additional parks both for neighborhoods and for the general public.
3. City functions are in several different buildings: Should they be consolidated in one location with easy access and with multiple use functions?
4. There is need for additional fire facilities and equipment.

5. Senior citizens have need for a center to have social activities and recreational programs.
6. There is a need for a youth center to have social activities and recreational programs.
7. Cloverdale's population has a high percentage of senior citizens which creates needs and demands for services unique to this stage of life. Many, because of fixed income, cannot easily pay for the cost for increased services caused by new development or inflation.
8. Is there a need for a movie theatre and a playhouse?
9. Increased number of young families will require new school sites and better facilities.
10. A recent influx of young families creates immediate and pronounced demands for added services. As these families mature the demand will change.
11. Cloverdale's isolated geographic location makes it difficult for children, teens and young adults to have access to facilities and services needed for a positive lifestyle. Can a center with programs be created to serve this group?

#### Tourism:

1. The amenities that attract the tourist (historic, small town character) are unique and fragile. They are threatened by the tourist industry as it develops additional land.
2. Tourism competes with the small town atmosphere in the form of traffic congestion, parking and competition for retail and service economy.

#### Land Use Mix and Options:

1. There is need to achieve a commercial sector balance so that the City's business district does meet resident-oriented demand for goods and services and there is not additional loss of local serving business.
2. There is need for additional commercial and light industrial land.
3. Cloverdale is largely identified with its downtown on Highway 101. With construction of the bypass and related satellite commercial areas, there may be new perceptions of Cloverdale and its image.



4. Cloverdale has vacant land within existing serviced areas. How can it be encouraged to development this land before going outward.
5. Cloverdale needs a balance of residential, commercial, industrial and public land.
6. Cloverdale has much land that is undeveloped and in transitional and planned development zones: Should it go commercial or residential?
7. In considering commercial land use decisions, it must carefully determined what types of uses are allowed and where they are to be located to get balanced economy.
8. In certain areas multi-family and professional offices are allowed in older neighborhoods. Is this desirable?
9. Certain areas are blighted. What means are there to renew the appearance and use of these properties.
10. There is pressure to leapfrog development prior to planned expansions of sewer, water and road systems.
11. The possibility exists that franchises and fast food chains may want to locate in Cloverdale especially near the new bypass interchanges. What are the City's options?
12. How can the airport property be developed in a safe manner, retaining the airport use but minimize noise and safety impacts.

#### Regional/County Policies and Activities:

1. The San Francisco Bay region demands and impacts (housing and air quality) threaten the small town character of Cloverdale.
2. County land use decisions on adjacent properties can have a profound effect on Cloverdale. How can the city monitor these actions and make sure our concerns are incorporated into the decision-making process?
3. Should an urban reserve line be set between the small lot subdivision and rural one acre lots within the City? Is there a conflict between the City's allowable density of development and the County agriculture zoning practices?

4. Cloverdale is experiencing growth pressure from the Bay area which has caused land and housing values to sky rocket leaving local residents at local wages unable to compete.

### CIRCULATION ELEMENT

The Circulation Element consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other local public utilities and facilities, all correlated with the land use element.

#### State Mandated Issues:

- Major thoroughfares
- Transportation routes
- Terminals
- Other local public utilities and facilities

#### Local Issues:

##### Vehicle and Non-vehicle Safety:

1. Some existing streets do not meet safety design standards or are in need of proper signage to minimize safety hazards.
2. Intersection design and signalization is substandard in certain areas.
3. Deteriorating streets, curbs, gutters and sidewalks exist.
4. Street lights are lacking in certain areas.

##### Street Standards and Policies:

1. Rural versus urban street standards (width, development requirements, sidewalks, etc.)
2. Hillside road standards (grade, width, improvement requirements).
3. Cul-de-sac development policies (width, length, when required).
4. Fire safety street standards (width and development requirements).

5. Public versus private streets. When does the City want a dedication?

#### Pedestrian and Transit Needs:

1. Increasing Cloverdale's pedestrian orientation.
2. Lack of pedestrian walkways and sidewalks that are linked to serve the entire community.
3. Pedestrian cross walks on busy streets.
4. Need for bicycle paths within City rights-of-ways that are linked to serve the entire community.
5. Bicycle touring from city to city is popular in Sonoma Valley. How can Cloverdale contribute?
6. Private bus terminals and routes, public taxi service: are they adequate?

#### Utilities:

1. Coordinating location and undergrounding of private utilities (electric, telephone, cable, gas) to coincide with future City land use and capital improvement plans.

#### Water Availability:

1. Coordinate timing and location of water line expansion with land use policy.
2. Quantity of water for future uses: Where will it come from, when will it be available and how is it to be paid for?
3. Deteriorated water distribution system in certain areas.
4. Lack of funds to meet water expansion and existing repair needs.
5. Controlling water consumption of existing users.

#### Sewer Treatment:

1. Coordinating timing and location of sewer lines expansion with land use policy.

2. Commercial and industrial users placing boron, increasing the pH and BOD demand of sewer influent.
3. Controlling sewer generation by commercial and industrial users.
4. Deteriorated collection system for sewer in certain areas.
5. Limits of the sewer treatment plant capacity and demand on system: What is the desired level of expansion and how is it to be paid for?

#### Drainage:

1. Poor drainage systems (open ditches) in certain areas of town.
2. Lack of drainage systems for parts of city.
3. Lack of drainage management plan and capital budget.

#### Airport:

1. Existing airport safety and how this can be enhanced.
2. The airport may expand or have new developments in the future. How can this be accomplished in a manner which minimizes noise and safety impacts?

#### Tourism:

1. Tourism impacts on City roads, public parking, sewer and water.

#### Vehicle Air Pollution:

1. Air pollution from local vehicles, Sonoma County and San Francisco Bay region.

### HOUSING ELEMENT

The Housing Element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built



housing, and mobilehomes, and shall make adequate provision of the existing and projected needs of all economic segments of the community.

State Mandated Issues:

- Assessment of immediate housing needs.
- Projected new construction needs.
- Analysis of existing and potential sites for housing of all types in the jurisdiction.
- Assessment of actual and potential governmental and non-governmental constraints on the maintenance, improvement, and development of housing for all income levels.
- Analysis of the opportunities for energy conservation in residential development.

Local Issues:

Housing Needs:

1. Affordable housing for those people who live and work here to meet all income levels.
2. Need for a housing mix in the community to satisfy local demand, i.e., sufficient rental housing, homes available for purchase; and, type of housing whether single-family detached or multi-family attached.
3. What types of housing units are on the market that local residents must compete for with out-of-town investors.
4. Housing for farmworker and other low salary jobs is lacking in Sonoma Valley. What should Cloverdale's contribution be?
5. Housing rehabilitation can keep homes in the housing stock. How can this be encouraged?
6. Cloverdale has a large retirement population. Is there sufficient types housing for the special needs of this segment of the population now and in the future?
7. Difficulty to find land for affordable housing.
8. Conversion of residential structures to commercial uses.

9. Infrastructure limitations (roads, drainage, sewer and water) to residential development in certain areas of the City.

#### Retaining Residential Character:

1. How can the City work to retain neighborhood character especially in older neighborhoods?
2. Commercial and industrial designations are sometimes located such that they will impact residential land uses.
3. Require insulation between low- and high-density neighborhoods.
4. Leapfrog development can occur if policies concerning expansion of sewer and water lines and road systems are not articulated and followed.
5. Residential developments can diminish physical and environmental amenities which drew people here in the first place.

#### Planning for Housing:

1. Hillside design standards are not present to protect viewsheds and environmental concerns.
2. Housing impact fee for new businesses is not in effect to help house employees for low salaried positions.
3. Infrastructure timing often times is not coordinated with residential land use decisions.
4. How can in-fill of existing vacant lots be encouraged?
5. What is the proper balance between land set aside for residential development and that set aside for commercial and industrial uses?
6. Cloverdale has a limited land area. Existing zoning primarily calls for low density residential development. How can Cloverdale achieve affordable housing which usually needs high density development and still retain the large lot open space feeling?
7. Finding funds or other incentives for affordable housing.
8. Regional housing needs determination by the Association of Bay Area Governments. Is it possible to meet their objectives?

9. Regional growth pressures bring investors which inflate housing values. What can Cloverdale do about it?
10. Inclusionary zoning should be considered to require subdivisions to set aside affordable housing.

### CONSERVATION AND OPEN SPACE ELEMENT

The conservation portion of the Conservation and Open Space Element is for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. The open space portion is a plan for the comprehensive and long-range preservation and conservation of "open-space land." "Open space land" is defined as any parcel or area of land or water that is essentially unimproved and devoted to open-space use.

#### State Mandated Issues (Conservation):

- Water and its hydraulic force.
- Forests.
- Soils.
- Rivers and other waters.
- Fisheries.
- Wildlife.
- Minerals.
- Other Natural Resources.

#### State Mandated Issues (Open Space):

- Open space for the preservation of natural resources including, but not limited to:
  - Areas required for the preservation of plant and animal life including habitat for fish and wildlife;
  - Areas required for ecologic and other scientific study;

Rivers, streams, bays and estuaries; and,

Coastal beaches, lakeshores, banks of rivers and streams, and watersheds.

-Open space used for the managed production of resources, including but not limited to:

Forest lands, rangeland, agricultural land and areas of economic importance for the production of food or fiber;

Areas required for recharge of ground water basins;

Bays, estuaries, marshes, rivers and streams which are important for the management of commercial fisheries; and,

Areas containing major mineral deposit, including those in short supply.

-Open space for outdoor recreation, including but not limited to:

Areas of outstanding scenic, historic and cultural value;

Areas particularly suited for park and recreation purposes, including access to lakeshores, beaches, and rivers and streams;

Areas which serve as links between major recreation and open-space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors.

-Open space for public health and safety, including, but not limited to:

Areas that require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soils areas, flood plains, watersheds, areas presenting high fire risks, areas required for the protection of water quality and water reservoirs and areas required for the protection and enhancement of air quality.

- Demands for trail-oriented recreational use.

- The feasibility of integrating city and county trail routes with appropriate segment of the California Recreational Trails System.

#### Local Issues:

#### Conservation and Resource Development:



1. The natural environment (riparian corridors, forestlands, agricultural lands, ground water recharge areas, groundwater) and Cloverdale's image are inseparable. Can Cloverdale accommodate development and still retain its open space feeling?
2. Loss of agricultural land and abandonment. Development pressures have made agricultural uses secondary.
3. Watershed protection to ensure a good water supply and to prevent soil erosion and flooding.
4. Tree preservation especially oak and historic trees.
5. Wildlife is diminishing as open lands are developed.
6. Cloverdale has creeks and rivers that support fisheries. Should this resource be enhanced?
7. Hillside development increases soil erosion potential. How can this be prevented?
8. Air quality has deteriorated due to increased auto traffic both locally and in the region.
9. Hazardous wastes produced locally need to be properly disposed of.
10. Land fill (solid waste) must be properly disposed of now and in the future. How is the City to get rid of its sewer treatment plant sludge?

#### Utilization of Resources:

1. Stream and river reclamation to enhance fisheries and public use.
2. Agricultural uses have been allowed in the rural residential zones. Should this practice be continued or extended to other land use designations?

#### Loss of Open Space:

1. Loss of oak trees and other natural vegetation.
2. Loss of agricultural soils and development pressure on County agricultural preserve.
3. Groundwater recharge areas.

4. Preservation of water quality (watershed and riparian corridors).
5. Rare and endangered plants and animals have not been properly identified in Cloverdale.
6. Forest land is being developed and in some cases cut down despite protective regulations.
7. Development of sensitive lands, especially hillsides, is increasing.
8. Loss of open space may diminish the community character of Cloverdale.
9. Pressures for affordable housing will reduce lot size and thereby reduce open space.

#### Safety:

1. Slope stability on hillside properties.
2. Earthquake and ground stability since Cloverdale is in a liquefaction region.
3. Flood plain property is under increased pressure to develop. In what manner should Cloverdale allow development to occur?
4. Fire hazard is very high in and around Cloverdale especially in the open space areas. Such fires may pose a hazard to the more urbanized areas of town. What measures need to be taken to minimize the fire risks?
5. Erosion of stream banks and hillsides increases with urban development.
6. The Russian River has a 100-year flood plain. What flood control measures are necessary to minimize property damage and to protect the health and safety of residents.

#### Conservation Measures:

1. Archeological resources are not properly identified.
2. Access to and along creeks and rivers is not readily available.
3. Water conservation and water consumption measures have not been adhered to.

4. Landscaping requirements for new development are not clear and no requirement for water conservation measures are given.
5. There are no measures for protection of view corridors, unique landforms, scenic highways, or buffers between neighborhoods of differing intensities.
6. Building height standards and protection of viewsheds.

### NOISE ELEMENT

The Noise Element shall identify and appraise noise problems in the community. The noise shall analyze and quantify, to the extent practicable, current and projected noise levels for all of sources of significance.

#### State Mandated Issues:

- Identification and appraisal of major noise sources;
- Existing and projected levels of noise and noise contours for major noise sources;
- Determination of the extent of "noise problems in the community;" and,
- Section and imposition of methods of noise attenuating and the protection of residences from excess noise.

#### Local Issues:

1. Change in community character as noise levels increase.
2. Noise from specific sources: airport, roadways.
3. Noise impact with increased traffic on existing roads from changes in circulation patterns.
4. Siting or conditioning new development to maintain existing noise levels or to correct noise problems.
5. Enforcement procedures to penalize noise violators.
6. Need for standards to determine tolerable noise levels.

### SAFETY ELEMENT

The Safety Element must address the protection of the community from any unreasonable risks associated with the effects of seismically included surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence and other geologic hazards in area; flooding; and wildland and urban fires. The safety element shall include mapping of known seismic and other geologic hazards. It shall also address evacuation routes, peakload water supply requirements, and minimum road widths and clearance around structures, as those items relate to identified fire and geologic hazards.

State Mandated Issues:

- The effects of seismically induced surface rupture, ground shaking, ground failures, tsunami, seiche, and dam failure;
- The effects of slope instability leading to mudslides and landslides, subsidence, and other geologic hazards known to the City;
- Mapping of known seismic and other geologic hazards;
- Flooding; and,
- Identification and appraisal of evacuation routes, peakloads water supply requirements, and minimum road widths as they relate to identified fire and geologic hazards.

Local Issues:

1. Hazardous materials being trucked through town.
2. Emergency response plans are largely unknown to local residents.
3. Unreinforced masonry buildings are subject to severe shaking during a seismic event.
4. Slope instability/landslide/mudslide potential increases with road and home development in hillside areas.
5. The potential for groundwater contamination heightens with increased well activity.
6. Sonoma Valley contains alluvial soils with high sand content. This can cause liquefaction or subsidence of soils during ground shaking caused by an earthquake.



7. Earthquakes and groundshaking are intensified in alluvial soils.
8. Flooding of the Russian River and the other creeks and water ways.
9. Fire hazards are high in both the rural and urban areas. There is need for hillside road standards for fire vehicles.
10. River and creek side slope failure and erosion.
11. River and open drainage ditches can be hazardous during the rainy season.
12. Fire safety of old buildings and historic buildings.
13. There is a need for new fire facilities and equipment.

### ECONOMIC ELEMENT

The Economic Element will address the economic and fiscal problems of Cloverdale and will consider the economic and fiscal effects of land use policies.

State Mandated Issues: None, as it is an optional element.

Local Issues:

Economy:

1. What measures need to be taken to maintain a healthy economic base for Cloverdale?
2. Designate areas for resident-oriented commercial uses.
3. Diversification of the local economy.
4. Home occupations are increasing and are a viable source of additional income for retired persons. What is the City's position regarding them?
5. Leakage in a local economy is caused when locals spend money outside the City for goods and services that could be available locally. How can Cloverdale reduce this leakage?
6. Should commercial development such as professional offices be allowed in residential neighborhoods?

7. The lack of a guiding economic plan or policies make it difficult for decision-makers to coordinate City government actions so that they benefit the local economy and create jobs.
8. Should the City try to determine the fiscal, social and economic impacts of a development during the approval process?
9. Cottage industries are a way a resident's can create a livelihood in their own home. Is this to be allowed?
10. Jobs are needed in Cloverdale for all skill levels.
11. How much land should be devoted to commercial/industrial uses and what mix of such uses is needed to achieve a commercial sector balance.
12. Jobs are needed in Cloverdale to keep children who have grown up a chance to stay.
13. To what extent should the City regulate or affect the type of businesses which want to locate here.
14. It is difficult for working people to find affordable day care for their children.
15. Should housing be allowed in commercial areas?
16. Growth pressures from region increase property values and commercial rents.
17. Large retirement population creates unique demands on the local businesses.
18. Fast food chains or franchises may want to locate in Cloverdale. Is there need to anticipate this?
19. Fiscal health of city.
20. Housing is needed for new jobs produced.
21. Public services and infrastructure may not keep up with commercial/industrial demands.
22. Impact on economy if earthquake destroys unreinforced buildings downtown.
23. Lack of City capital improvements.
24. Redevelopment of blighted areas of town.

25. Improving downtown image.
26. City capital improvement decisions. How do they affect the local economy and established businesses?

### RECREATION ELEMENT

The purpose of Recreation Element is to analyze existing recreational facilities, determine recreational needs, and provide a plan for the comprehensive and long-range provision of recreational land and facilities.

#### Local Issues:

1. The City of Cloverdale is committed to expanding the park facilities and services for its residents.
2. Funding sources are being sought for the expansion of parks and recreation.
3. Stream and river reclamation to enhance fisheries and public use.
4. Access to and along creeks and rivers is not readily available.

## **APPENDIX B**

### **GENERAL PLAN REQUIREMENT CHECKLIST INDEX**





# GENERAL PLAN REQUIREMENT CHECKLIST/INDEX

REQUIREMENT	VOLUME <sup>1</sup>	SECTION
<b>LAND USE</b>		
Proposed general distribution and location and extent of the uses of the land for:		
• housing	I, III	Land Use
• business	I, III	Land Use
• industry	I, III	Land Use
• open space	I, III	Land Use
• agriculture	I, III	Land Use
• natural resources	I, III	Land Use
• recreation	I, III	Land Use
	II	Recreation
• enjoyment of scenic beauty	I, III	Land Use
• education	I, III	Land Use
• public buildings and grounds	I, III	Land Use
• solid and liquid waste disposal	I, III	Land Use
• other categories of private and public	I, III	Land Use
Statement of standards of population density (people in a given area and not dwelling unit (du) per acre, unless the basis for correlation between the measure of du per acre and the number of people is set forth explicitly in the plan (Twain Harte v. Tuolumne, 138 CA 3d 699)	I	Land Use
Statements of standards of building intensity	I	Land Use
Identify areas subject to flooding and review annually	I, II, III	Health and Safety
Timberland production	N/A	

<sup>1</sup>The General Plan Update consists of three volumes: MEA and Issues, Policy Document, and EIR.

GENERAL PLAN REQUIREMENT CHECK  
INDEX  
cont.

REQUIREMENT	VOLUME	SECTION
<b>CIRCULATION</b>		
General location and extent of:		
• existing and proposed major thoroughfares	I, II, III	Circulation
• transportation routes	I, II, III	Circulation
• terminals	I, II, III	Circulation
• other local public utilities and facilities	I, II, III	Public Services
<b>HOUSING</b>		
Previous Housing Element Evaluation	II	Housing
Assessment of housing needs and inventory of resources and constraints to meeting needs		
• analysis of population and employment trends	II	Housing
• documentation of projections	II	Housing
• quantification of existing and projected housing needs for all income levels including share of regional housing need	II	Housing
• analysis and documentation of household characteristics including level of payment compared to ability to pay	II	Housing
• housing characteristics including overcrowding	II	Housing
• housing stock condition	II	Housing
• inventory of land suitable for residential development including vacant sites and redevelopment sites and analysis of relationship of zoning and public facilities and services to these sites	II	Housing
• analysis of potential and actual governmental constraints upon the maintenance, improvement or development of housing for all income levels, including land use controls, building		

GENERAL PLAN REQUIREMENT CHECK  
INDEX  
cont.

REQUIREMENT	VOLUME	SECTION
HOUSING cont.		
<ul style="list-style-type: none"> <li>codes, site improvements, fees and exactions and permit processing procedures</li> </ul>	II	Housing
<ul style="list-style-type: none"> <li>analysis of potential and actual nongovernmental constraints upon maintenance, improvement, and development of housing for all income levels, including availability of financing, the price of land, and costs of construction</li> </ul>	II	Housing
<ul style="list-style-type: none"> <li>analysis of special housing needs such as handicapped, elderly, large families, farmworkers, and families with female head of households</li> </ul>	II	Housing
<ul style="list-style-type: none"> <li>assisted rental housing at risk for conversion</li> </ul>	II	Housing
<ul style="list-style-type: none"> <li>energy conservation opportunities</li> </ul>	II	Housing
Statement of community goals, quantified objectives and policies relative to the maintenance, improvement and development of housing	I	Housing
A Program with a 5 year schedule of actions, including:		
<ul style="list-style-type: none"> <li>identify adequate sites which will be made available through zoning and development standards and public facilities; encourage development of a variety of housing types, including rentals, factory built, mobile homes, emergency shelters and transitional housing</li> </ul>	I	Housing
<ul style="list-style-type: none"> <li>assist in the development of housing to meet the needs of low and moderate income households</li> </ul>	I	Housing



GENERAL PLAN REQUIREMENT CHECK  
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cont.

REQUIREMENT	VOLUME	SECTION
<b>HOUSING cont.</b>		
• address and remove government constraints	I	Housing
• conserve and improve conditions of existing affordable housing stock	I	Housing
• promote equal housing opportunities	I	Housing
• identification of agencies and officials responsible for implementation of actions and means through which consistency will be achieved with other Plan elements and community goals	I	Housing
• description of public participation program	II	Introduction, Housing
	III	Introduction
<b>CONSERVATION</b>		
Conservation, development, and utilization of natural resources including:		
• water and hydraulic forces	I, II, III	Health and Safety
• forests	I, III	Conservation/ Open Space
• soils	II	Conservation/ Open Space
• rivers and other waters	II	Health and Safety
	II, III	Conservation/ Open Space
• harbors	N/A	
• fisheries	N/A	
• wildlife	I, II, III	Conservation/ Open Space
• minerals	I, II	Conservation/ Open Space

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cont.

REQUIREMENT	VOLUME	SECTION
<b>OPEN SPACE</b>		
Open space for the preservation of natural resources including but not limited to:		
• areas required for the preservation of plant and animal life including habitat for fish and wildlife	I, II, III	Conservation/ Open Space
• areas required for ecological and other scientific study	I, II	Conservation/ Open Space
• rivers, streams, bays and estuaries	III II	Health and Safety Health and Safety, Conservation/ Open Space
• coastal beaches, lakeshores, banks of rivers and streams and watersheds	I, II, III	Conservation/ Open Space
Open space used for the managed production of resources including but not limited to:		
• forest lands, rangeland, agricultural lands and areas of economic importance for the production of food and fiber	I, II	Conservation/ Open Space
• areas needed for recharge of groundwater basins	I, III	Conservation/ Open Space
• areas containing major mineral deposits including those which are in short supply	I, II, III	Conservation/ Open Space

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INDEX  
cont.

REQUIREMENT	VOLUME	SECTION
OPEN SPACE cont.		
Open space for outdoor recreation		
• areas of outstanding historical/cultural value	I, II, III	Cultural
• areas particularly suited for park and recreation purposes including access to lakeshores, beaches, rivers, and streams	II I	Recreation Open Space Parkland
• areas which serve as links between major recreation and open space reservations, including utility easements, banks of rivers and streams, trails, and scenic highway corridors	II I I, II	Recreation Conservation/ Open Space Circulation
Open space for public health and safety:		
• areas requiring special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soil areas, floodplains, watersheds, areas required for the protection and enhancement of air quality	II I	Health and Safety Health and Safety, Conservation/ Open Space
Open Space Inventory	I, II	Land Use
Action Program	I	Conservation/ Open Space

**GENERAL PLAN REQUIREMENT CHECK  
INDEX  
cont.**

REQUIREMENT	VOLUME	SECTION
<b>NOISE</b>		
Analyze and quantify current and projected noise levels for:		
• highways and freeways	II, III	Noise
• primary arterials and major local streets	II, III	Noise
• passenger and freight on-line rail and ground rapid transit	II, III	Noise
• commercial, general aviation, heliport, and military air operations	II, III	Noise
• local industries plants	II, III	Noise
• other ground stationary noise sources	II, III	Noise
Use CNEL or Ldn for contours	II, III	Noise
Noise contours shall be used as guide to estimate land use pattern that minimizes community exposure to excess noise	II, III	Noise
Implementation measures and possible solutions that address existing and foreseeable noise problems	I	Noise
<b>PUBLIC SAFETY</b>		
Protection of the community from unreasonable risks associated with:		
• surface rupture	I, II, III	Health and Safety
• ground shaking	I, II, III	Health and Safety
• ground failure	I, II, III	Health and Safety
• tsunami	II, III	Health and Safety
• seiche	II, III	Health and Safety
• dam failure	I, II, III	Health and Safety
• slope stability	I, II, III	Health and Safety



GENERAL PLAN REQUIREMENT CHECK  
INDEX  
cont.

REQUIREMENT	VOLUME	SECTION
<b>PUBLIC SAFETY cont.</b>		
• subsidence	I, II, III	Health and Safety
• other geologic hazards	I, II, III	Health and Safety
Flooding	I, II, III	Health and Safety
Wildland and urban fires	I, II, III	Health and Safety
Evacuation routes	I	Health and Safety
Peakload water supply rates	II, III II	Public Services Circulation
Minimum road widths	I, II	Circulation
Clearance around structures	I	Health and Safety
Geologic hazards mapping	II, III	Health and Safety

**APPENDIX C**  
**SURVEYS AND RESULTS**



# CITY OF CLOVERDALE - GENERAL PLAN UPDATE COMMUNITY RESPONSE SURVEY

## INTRODUCTION

The purpose of this community response survey is to provide the City with an understanding of community attitudes related to specific issues of community concern. Before planning for the future can begin, we must first realize what existing issues and ideas the community at large have.

Response to this survey will aid the City in updating the General Plan by letting us know how things stand now, and what you would like to see in the future. This is also your first opportunity as a citizen to get involved in the process.

The survey has been developed by the General Plan consultants, in conjunction with City staff and the General Plan Advisory Committee. Responses to this survey are confidential. For complete anonymity, do not include your name or return address. Please feel free to comment on any issues we may not have addressed in this survey.

Surveys should be returned to City Hall or other designated depositories (see Cloverdale Reville Edition April 18, 1990 for details) no later than May 2, 1990:

City Hall  
c/o Planning Director  
P.O. Box 217  
124 North Cloverdale Blvd.  
Cloverdale, CA 94525

TOTAL OF 167  
SURVEYS



The questions below have been grouped into several land use-related categories. The purpose is to focus on specific issues related to each land use. A map of Cloverdale is attached for you to refer to during the survey.

### Commercial Services

1. If the community were to grow, what types of commercial uses would you like to see?

Retail 86%  
Professional Office 46%  
No more commercial uses should be allowed 5%  
No Opinion 2%  
Other (Please specify) \_\_\_\_\_  
Health Clubs 1%

2. Should future commercial uses be

concentrated in one area? 43%  
spread out? 11%  
assembled in small clusters? 39%  
No opinion 0%  
Other (Please specify) \_\_\_\_\_  
Mini Mall 1%

### Industrial

3. Cloverdale is primarily a residential community and bedroom community for larger cities such as Santa Rosa. Should the City try to attract industrial and Research and Development type uses?

Yes 53% No 34%  
No opinion 7%  
South end of City 16%  
Edges of City 9%  
North End of City 4%

Near Freeway  
Downtown  
Industrial  
Park

If yes, where should these uses be located?

4. What types of industrial uses would best suit the City?

Clean Non-Polluting	13%	Wine Related	1%	Any
High Tech	4%	Research &		
Light Industry	15%	Development	1%	Warehouse
<u>Tourist Facilities</u>		Timber/Ag	1%	Business Parks

5. On a whole as a region, this area is characterized as being visitor-serving or tourist-oriented. This is not true for the City of Cloverdale. Do you see the need for addition/expansion of facilities such as:

Quality Restaurant	6%
Wine Related	1%
Conference Center	1%
Parks	1%
No Change	1%
SPA	1%
Rifle Range	1%
Resort	1%
Farmers' Market	1%

	<u>Yes</u>	<u>No</u>
Motels	<u>45%</u>	<u>28%</u>
Hotels	<u>20%</u>	<u>40%</u>
Bed &		
Breakfast	<u>37%</u>	<u>28%</u>
Destination/		
Golf Resorts	<u>46%</u>	<u>24%</u>
No opinion	_____	_____
Other (Please specify)	_____	_____

6. Growth has the ability to bring additional jobs and revenue into a City, but it can also change the nature of the City. Overall, do you see this influence as:

Positive 65%  
 Negative 27%  
 No Opinion 2%

and why? More Services 5% Community Pride  
 More Jobs & Revenue 6% Big City Problems  
Residential Loss of Small Town 4% Planned Growth  
 Diversity 1% Neg Impact on Natural/  
 Financial Resources

7. The City currently has a variety of housing types including mobile homes, apartments, low-income housing, single-family detached, single-family attached. Do you feel the community is adequate/inadequate in any of these areas?

	<u>Adequate</u>	<u>Inadequate</u>
Mobile Homes	<u>67%</u>	<u>14%</u>
Apartments	<u>45%</u>	<u>28%</u>
Low-Income Housing	<u>45%</u>	<u>38%</u>
High-End (Executive) Housing	<u>49%</u>	<u>23%</u>
Single-Family Detached	<u>36%</u>	<u>35%</u>
Single-Family Attached	<u>42%</u>	<u>22%</u>
Senior Housing	<u>37%</u>	<u>32%</u>
No Opinion	<u>4%</u>	

8. What lot sizes would you like to see in future subdivisions? (Please check all that apply).

1/4 Acre or smaller	<u>39%</u>	None	1%
1/2 Acre	<u>45%</u>	All Sizes	4%
1 Acre	<u>17%</u>	1/2 Acre	
1 - 5 Acre	<u>14%</u>	Minimum	1%
5+ Acre	<u>10%</u>		
Other (Please specify)			

### Community Design

9. The City is presently laid out on a basic grid pattern which lacks any definable land use areas. Should any future growth continue with:

	<u>Yes</u>	<u>No</u>
Established Grid Pattern	<u>33%</u>	<u>13%</u>
Clusters Between Existing Land Uses	<u>37%</u>	<u>11%</u>
New Development In Self-Contained "Villages"	<u>25%</u>	<u>18%</u>
No Opinion	<u>17%</u>	
Other (Please specify)		

10. The proposed 101 bypass will affect the downtown area's dependence on business by attracting some of these uses over to the new highway. What types of land uses should fill in the downtown area voids?

Retail/Commercial	34%	Parking	11%	Shops W/Apts Above
Parks & Rec	11%	Museums/Church	1%	Hall
Bike Trails	1%	Health Club	1%	Pedestrian Strips
Quality Restaurants	9%	Amphitheater	1%	Miniature Golf

11.	With regard to the Bypass, would you prefer a land use alignment similar to Healdsburg (i.e., no commercial uses near Bypass)?	Yes	<u>65%</u>
		No	<u>20%</u>
		No Opinion	<u>9%</u>

12.	What types of land uses would you like to see near/adjacent to the Bypass?	No opinion	<u>4%</u>
		Tourist-Oriented (winery, wine shop)	<u>43%</u>
		Commercial	<u>20%</u>
		Residential	<u>7%</u>
		Industrial	<u>18%</u>
		Park	<u>35%</u>
		Convenience (Fast-Food, Gas Stations)	<u>36%</u>
		Others (Please Specify)	<u>                    </u>
			<u>                    </u>
			<u>                    </u>

13.	What type of improvements would you prefer for parking areas in the City? (Check all that apply).	Lighting	<u>61%</u>
		Landscaping	<u>64%</u>
		Paved Lots	<u>52%</u>
		Angled On-Street Parking	<u>40%</u>
		Screened Views from highway	<u>19%</u>
		Employ techniques to render area visually unobtrusive (i.e., reduce glare)	<u>35%</u>
		Other	<u>                    </u>

14. When I drive in/out of Cloverdale, I visualize that the city starts/stops at \_\_\_\_\_.

North	-Scales	32%	End of Freeway	5%	Stoplight	1%	Hwy 128	26%
&	Clover Mrkt	9%	Furber Property	1%	Dutcher Crk	2%		
South	-MGM Brakes	4%	Asti	2%	Briarwood	2%	Quick Stop	10%
	Kelly Road	3%	Owl Cafe	1%	Lutheran Church			10%

The following questions are economically and lifestyle-related. Much of this information is similar to that provided by census information. Because the census information is now 10 years old, we are requesting responses in order to have the most up-to-date data.

15. Which age category do you fall into?

18-25	<u>1%</u>
26-40	<u>32%</u>
41-55	<u>28%</u>
55+	<u>46%</u>

16. How long have you been a resident of Cloverdale?

Prior to 1950	<u>13%</u>
1950 - 1959	<u>8%</u>
1960 - 1969	<u>10%</u>
1970 - 1979	<u>19%</u>
1980 - 1984	<u>11%</u>
1985 - 1988	<u>25%</u>
1989 - 1990	<u>17%</u>

17. For the next question, please indicate whether you are answering as a single respondent ☒ <sup>32%</sup> (i.e., you and your spouse are both responding to survey separately) or as a member of a household ☐ <sup>53%</sup>

a. What is your household size (including yourself)? <sup>1 - 5%</sup> 2 - 35% <sup>3 - 11%</sup> 4 - 12% <sup>5 - 6%</sup> 6 - 1%  
(Those persons living with you at your place of residence)

b. What was your (personal ☐ <sup>10%</sup> or household ☒ <sup>29%</sup>) income in 1989? (including wages, investment earnings, rent and other sources of income).

Less than 20,000	<u>8%</u>
20,000 - 29,999	<u>10%</u>
30,000 - 39,999	<u>17%</u>
40,000 - 49,999	<u>16%</u>
50,000 - 74,999	<u>20%</u>
75,000 - 100,000	<u>4%</u>
100,000 +	<u>5%</u>
Decline to comment	<u>19%</u>

18.a. Do you presently

Own	<u>75%</u>
Rent	<u>7%</u>

b. What percentage of your salary goes towards rent/mortgage payments?

Less than 10%	<u>30%</u>
10 - 15	<u>7%</u>
16 - 20	<u>14%</u>
21 - 29	<u>14%</u>
30 - 39	<u>8%</u>
40 - 49	<u>5%</u>
50 +	<u>2%</u>

c. Do you currently live in a condominium/apartment, mobile home, or house?  
( 1% ) (5%) (81%)

19. What is your highest level of education?

High school or equivalency 22%  
Vocational school or Junior College 29%  
College/University - Degree 28% No. of years completed \_\_\_\_  
Graduate School - Degree 18% No. of years completed \_\_\_\_

20.a. How many miles (one-way) do you commute to work?

Less than 5	<u>41%</u>
6 - 15	<u>7%</u>
16 - 20	<u>5%</u>
21 - 30	<u>7%</u>
31 - 45	<u>15%</u>
45 +	<u>7%</u>



20.b. How long (on the average) is your commute (one-way)?

1 - 10 Min.	<u>33%</u>
11 - 20 Min.	<u>10%</u>
21 - 30 Min.	<u>9%</u>
31 - 45 Min.	<u>16%</u>
46 - 60 Min.	<u>6%</u>
60 + Min.	<u>3%</u>

21. What types of cultural or entertainment amenities would you like to see in Cloverdale? (Check all that apply)

Park	3%	Farmers' Mrkt	1%
Night Club	1%	Scandia	1%
Art Center	1%	Roller/Ice Rnk	1%
Sunday Free Entertainment			1%

Movie Theater	<u>54%</u>
Playhouse	<u>37%</u>
Community Center	<u>55%</u>
Senior Center	<u>37%</u>
Youth Center	<u>43%</u>
No Opinion	<u>8%</u>
Other	<u>      </u>

22.a. Where did you last purchase the following?

	<u>Downtown Cloverdale</u>	<u>Healdsburg</u>	<u>Santa Rosa</u>	<u>San Francisco</u>	<u>Other (Identify)</u>
Groceries	<u>64%</u>	<u>22%</u>	<u>14%</u>	<u>1%</u>	<u>Windsor</u> 2%
Medication	<u>64%</u>	<u>11%</u>	<u>10%</u>	<u>2%</u>	<u>Windsor</u> 1%
Liquor	<u>40%</u>	<u>14%</u>	<u>19%</u>	<u>1%</u>	<u>Windsor</u> 1%
Clothing	<u>15%</u>	<u>12%</u>	<u>51%</u>	<u>3%</u>	<u>Mail</u> 1%
Furniture	<u>2%</u>	<u>1%</u>	<u>63%</u>	<u>4%</u>	<u>Ukiah</u> 2% <u>Marin</u> 1%
Major Appliance	<u>20%</u>	<u>7%</u>	<u>59%</u>	<u>2%</u>	<u>Bay Area</u> 2% <u>Ukiah</u>
Automobile	<u>7%</u>	<u>12%</u>	<u>37%</u>	<u>1%</u>	<u>Petaluma</u> 1% <u>Ukiah</u> 1%
Recreational Vehicle (RV, Boat)	<u>1%</u>	<u>1%</u>	<u>10%</u>	<u>1%</u>	<u>Petaluma</u> 1% <u>Ukiah</u> 1% <u>Sonoma</u> 1%
Records, Tapes, Video Rental	<u>53%</u>	<u>3%</u>	<u>21%</u>	<u>2%</u>	<u>Mail</u> 1% <u>Windsor</u> 1%
Jewelry	<u>6%</u>	<u>6%</u>	<u>40%</u>	<u>3%</u>	<u>Ukiah</u> 1%

22.b. For those items not purchased in Cloverdale, please explain why you do not or cannot make these purchases in the City. Selection 59% Store Hours 2%

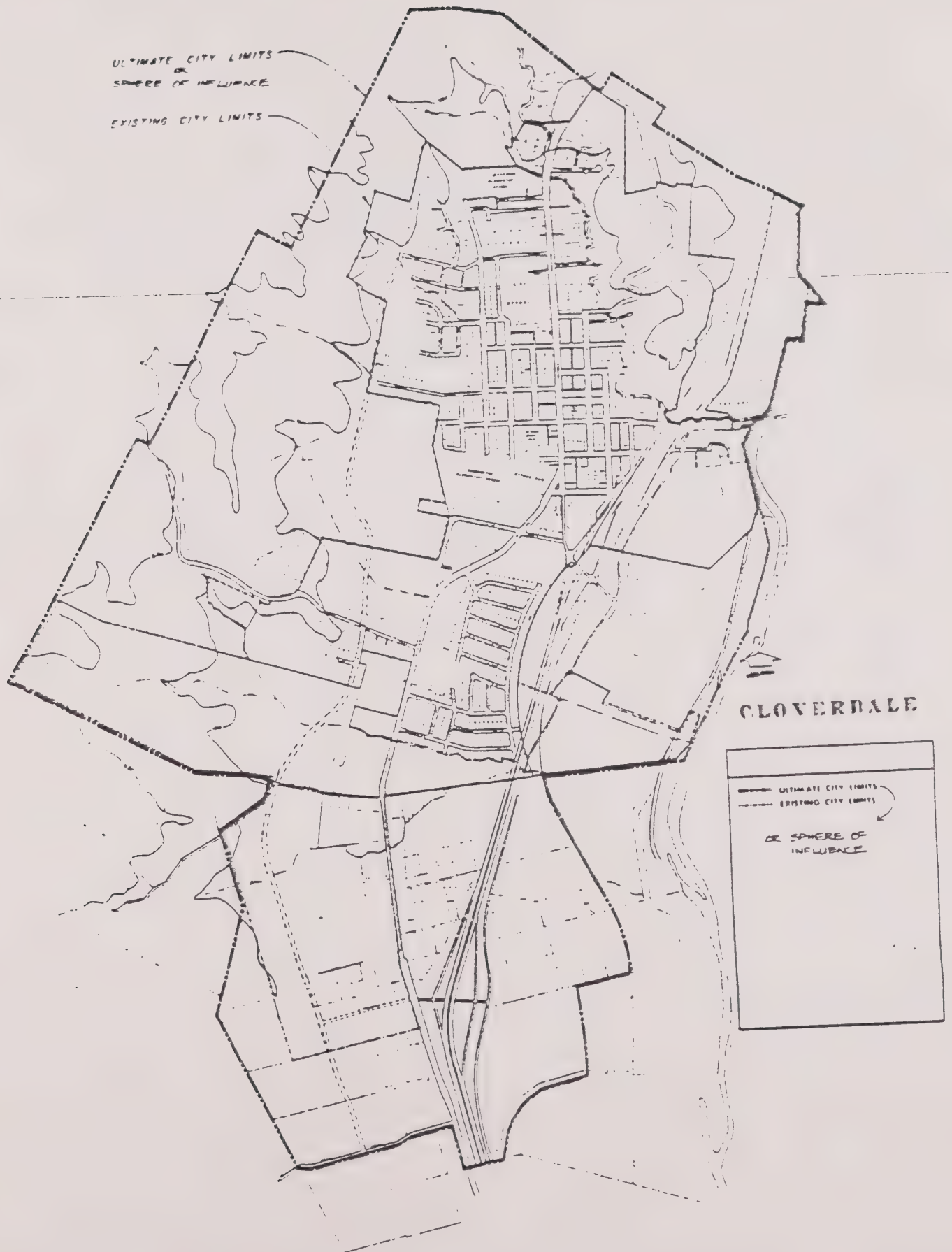
Price 35% Safety 1%

23. Overall, what percentage of your dollar purchases are made in the City of Cloverdale?

less than 10%	<u>18%</u>
10 - 20	<u>20%</u>
21 - 30	<u>14%</u>
31 - 40	<u>10%</u>
41 - 50	<u>6%</u>
50 +	<u>20%</u>

Other Comments: Please feel free to comment on any of the survey questions or discuss items not covered by this survey.

Congratulations! You have reached the end of the survey. The General Plan Advisory Committee wishes to thank you for your time and input.





**APPENDIX D**  
**FISCAL ANALYSIS**





CLOVERDALE GENERAL PLAN  
FISCAL IMPACT ANALYSIS

PHASE 1 REPORT  
—FISCAL IMPACT MODEL AND PROTOTYPICAL LAND USES—

Prepared For :  
STA, Inc.

January 21, 1991

Prepared By  
The Levander Company, Inc.  
1815 Via El Prado, Suite 308  
Redondo Beach, California 90277  
(213) 540-1549

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## MEMORANDUM

To: STA Inc. Date: January 21, 1991  
Attn: Ms. Lisa Grueter

From: Dale H. Levander File: 1274

Subject: CLOVERDALE GENERAL PLAN FISCAL IMPACT ANALYSIS: PHASE 1 REPORT  
—FISCAL IMPACT MODEL AND PROTOTYPICAL LAND USES

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This report finalizes our draft report to you of September 17, 1990, under the same subject. It presents our Phase 1 analysis of fiscal impacts of potential development resulting from implementation of the Cloverdale General Plan, now in process of being updated. The purpose of this analysis is to assist STA, Inc. and its consultant team in formulating and evaluating land use alternatives. The study area includes the existing City of Cloverdale and unincorporated County areas within the City's sphere of influence and beyond. Fiscal projections for various land uses herein are predicated on the assumption that any new development sites will be annexed to the City of Cloverdale.

Our approach in preparing this Phase 1 report has been as follows:

- o To evaluate the requirements for City services to accommodate new development and related expenditures and revenues.
- o To create a fiscal model in computer form which appropriately reflects revenue and expenditure relationships for land uses under consideration.
- o To utilize this fiscal model in determining fiscal impacts on the City for 12 prototypical one-acre development alternatives, including five residential alternatives and seven commercial/industrial alternatives.

The resulting cash flow projections for prototypical land uses are intended to provide the consultant team useful input in determining land use alternatives. Also, it is planned that the fiscal model utilized in this report will be utilized in subsequent Phase 2 work, to prepare projections of one or more composite land use alternatives:

The fiscal model utilized in Phase 1 projections presents estimates of:



- o Annual revenues and expenditures upon completion of any given development.
- o One-time revenues and expenditures involved in the development process.

This fiscal model essentially projects revenues and expenditures on a "stable-year" basis. It does not project cash flow over an extended time period. Should the City wish to prepare projections of given land use alternatives over extended periods of time, the model utilized in Phase 1 work can be expanded to meet this purpose. Projections herein cover the principal budget items impacted by new development. Specific items excluded from consideration herein are noted in the body of the report. Also, we want to note that projections herein consider City finances in total. Detailed breakdowns by individual fund account are not attempted in this type of analysis.

In the preparation of this Phase 1 report, we have utilized information from the following sources:

- o Personal inspection of the Cloverdale General Plan update study area.
- o Telephone discussions with the City Finance Director and review of the City's 1990-91 budget, to gain an understanding of basic City financial relationships.
- o Interviews with key members of City staff to gain their views on service requirements.
- o Review of Assessor maps, Assessor tax rolls, and Auditor-Controller tax rate breakdowns, obtained by contact with these two County offices.
- o Utilization of taxable sales reports issued regularly by the State Board of Equalization, providing a basis for determining the effective sales tax rate being received by cities within Sonoma County.
- o Utilization of our file of prototypical development values, taxable sales levels, and hotel room sales levels, derived from our experience in economic evaluations elsewhere in California.

This report is summary in nature, including Section 1 (Executive Summary) immediately following. An appendix section presents detailed computer calculations and other back-up research information.

# 1. EXECUTIVE SUMMARY

This Phase 1 analysis considers 12 prototypical one-acre land use developments, as follows:

	<u># Units</u> <u>Per Acre</u>	<u>SF</u> <u>Bldg Sp</u> <u>Per Acre</u>
Residential		
Single-Family Estate	0.5	
Single-Family Estate	2.0	
Single-Family Detached	5.0	
Single-Family Attached	10.0	
Multiple-Family Attached	20.0	
Commercial/Industrial		
Local Retail		11,000
Freeway Retail		11,000
Restaurant (Fast Food)		8,000
Hotel (50 Rooms @ 450SF/Room)		22,500
Auto Dealership		8,000
Rental Office		17,000
Light Industry		17,000

Each of these prototypical uses has been considered as an individual development program, with City revenues and expenditures to serve such development projected for each alternative.

The summary results of these projections are presented in Exhibit 1 and Table 1 immediately following. Principal conclusions to be drawn from these projections include the following:

- o By far the greatest cash generators to the City are hotel and auto dealer usage, \$50 thousand to \$56 thousand per acre annually.
- o Restaurant and retail facilities also generate substantial cash flows, in the \$23 thousand to \$27 thousand per acre range.



Exhibit 1  
NET CASH FLOW  
ONE-ACRE PROTOTYPICAL ALTERNATIVES

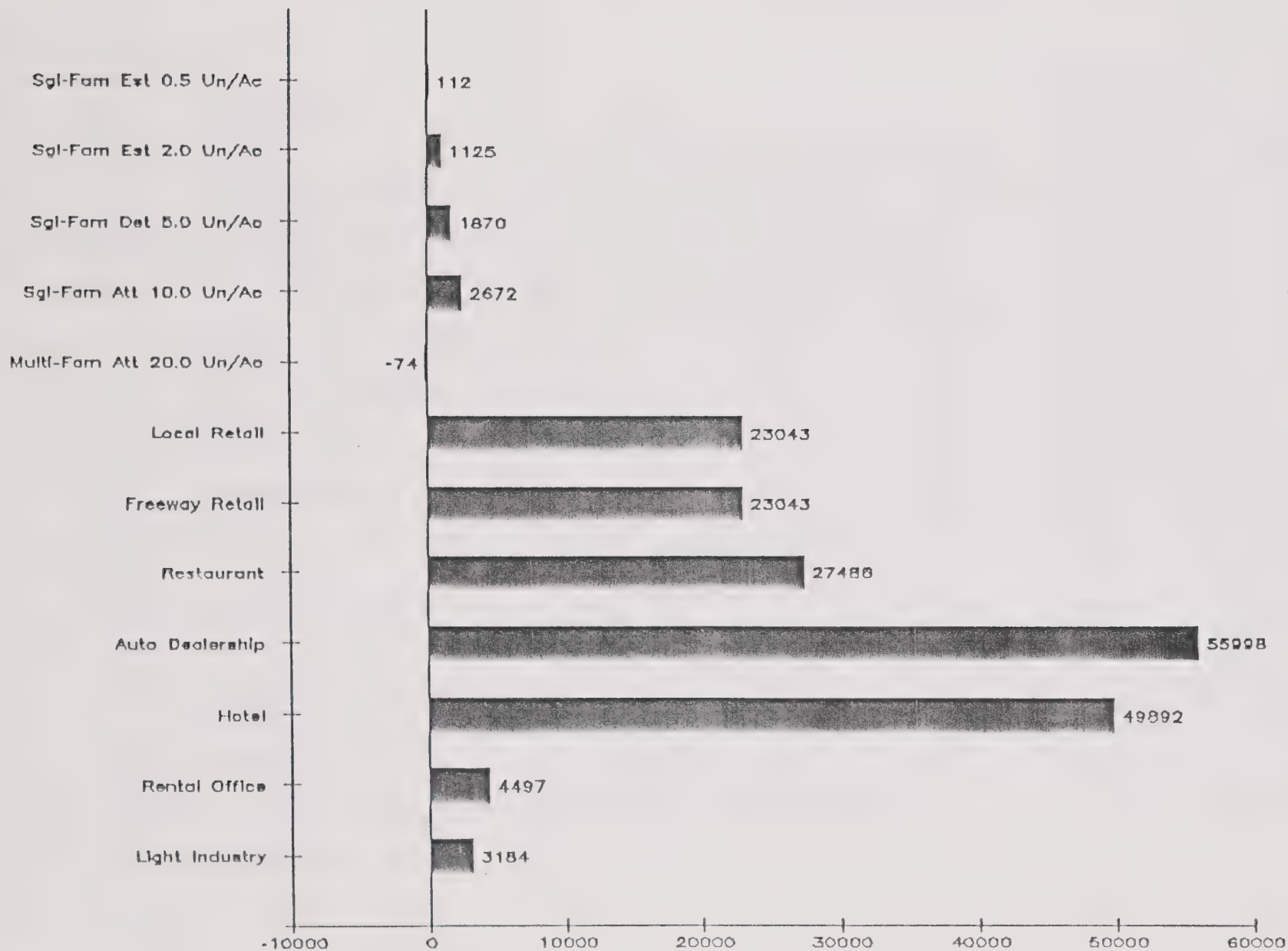






Table 1  
SUMMARY ANNUAL ON-GOING CASH FLOW TO CITY  
ONE-ACRE PROTOTYPICAL DEVELOPMENT ALTERNATIVES

<u>Land Use Alt</u>	<u>Prototypical Land Use</u>	<u>Revenues</u>	<u>Expenditures</u>	<u>Net Cash Flow/(Deficit)</u>	
				<u>Amount</u>	<u>% To Expend</u>
P01	Single-Fam Estate 0.5 Unit/Ac	\$ 721	\$ 609	\$ 112	18.4
P02	Single-Fam Estate 2.0 Unit/Ac	2,492	1,367	1,125	82.3
P03	Single-Fam Detached 5.0 Unit/Ac	4,945	3,075	1,870	60.8
P04	Single-Fam Attached 10.0 Unit/Ac	7,236	4,564	2,672	58.6
P05	Multi-Fam Attached 20.0 Unit/Ac	7,959	8,033	( 74)	(0.9)
P06	Local Retail	25,917	2,874	23,043	801.6
P07	Freeway Retail	25,917	2,874	23,043	801.6
P08	Restaurant	29,577	2,091	27,486	1,314.8
P09	Auto Dealership	58,089	2,091	55,998	2,678.7
P10	Hotel	55,771	5,880	49,892	848.6
P11	Rental Office	8,939	4,442	4,497	101.2
P12	Light Industry	7,103	3,920	3,184	81.2

Note: Differences in subtraction are result of computer rounding.

Source: Natelson Levander Whitney, Inc.

- o Single-family residential cash flows are also positive, but well below commercial cash flows.
- o Multiple-family residential development is estimated to yield a very slight negative cash flow to the City, which we consider to be essentially a breakeven situation.

Please refer to Appendix A (Tables A1 for each of the 12 alternatives) for further detail.

We think it important to note that all of the uses under consideration—with the possible exception of multiple-family residential—basically carry themselves in terms of City finances. Obviously the hotel, auto dealer, restaurant/fast food, and retail uses present a far superior financial picture than do the other uses; but none of the other uses appears to present a significant cash drain to the City.

The principal revenues impacted by new development are property taxes and sales taxes. The City receives a relatively high share of the property taxes collected by the County. We estimate that it receives approximately 35% of the \$1 per \$100 AV base tax rate. This share is exclusive of redevelopment tax increments, which apply only to a portion of the City, and are not considered in prototypical analysis contained herein. Redevelopment property tax increments can be considered on a site specific basis in subsequent analysis.

The above projections cover on-going City operations. Our detailed projections also cover one-time revenues and expenditures during the development process itself, covering:

- o The development control function itself—zoning, building permit, and engineering processing—which we have assumed to be a breakeven situation; that is, development control fees equal development costs.
- o Property transfer taxes resulting from sale of single-family units to home buyers, resulting in a relatively small cash surplus to the City, computed at 55 cents per \$1,000 of sale value.
- o Related fees and costs for park and thoroughfare capital facilities.

The above noted capital facility fees include the following:

- o \$900 per residential unit for parks.
- o \$150 per residential unit for thoroughfare improvements.

Our analysis assumes that these fees are offset by costs of like amount. In reality, this may not be the case. For example, the City is currently considering a park requirement for new residential development of 5.0 acres per 1,000 population, a standard utilized in a number of cities elsewhere in the State. However, we estimate that the park improvements fee will pay for only about 50% of the cost of acquiring land and improving these facilities at the 5.0-acre level. This is a matter for possible consideration in subsequent planning. Also, this analysis does not consider possible new fees or increases in fees which may be appropriate for long term General Plan implementation. These are matters which we are prepared to address with the consultation team in Phase II of our work.

Please refer to Appendix A (Tables A1 for each of the 12 alternatives) for further detail.

## 2. PROTOTYPICAL ONE-ACRE DEVELOPMENT PROGRAMS

As noted earlier, 12 prototypical development programs have been formulated, with key factors for each identified in Table 2. Specific factors utilized for residential and commercial/industrial usage take into consideration:

- o Our personal inspection of the study area, discussions with City staff, and recent developments within Cloverdale.
- o A large amount of recent development experience elsewhere in California.

For purposes of this preliminary analysis, we have assumed that the City will realize an overall average of 2.5 acres of park per 1,000 population, computed at 50% of the aforementioned possible goal. This factor can be easily modified in subsequent planning, as prototypical factors utilized are preliminary, subject to refinement during the subsequent planning process. Also, the computerized fiscal impact model can be modified to incorporate additional uses should this be appropriate.

## 3. CITY BUDGET REVIEW

As a first step in our analysis, we conducted a detailed review of the City's 1990-91 budget. In this process, we prepared Appendix Tables B1 and B2, in which we have summarized City revenues and expenditures and calculated these amounts on a per-capita basis. Also, for expenditures we made preliminary judgements concerning the nature of each cost, whether it is:





Table 2

Source: Natelson Levander Whitney, Inc.



- o A direct cost, which essentially is a cost of a department providing direct services to residents.
- o Or an indirect cost, which we have termed an administration cost, covering costs of departments essentially providing overall City-wide administrative services.

Per-capita calculations are based upon an estimated City population in January 1990 of 4,856 residents, per the State Department of Finance.

We want to note that most of the revenue and expenditure projections utilized in our analysis are not keyed directly to per-capita figures derived from the budget. To illustrate, only nine revenue items and three expenditure items of 22 total items projected are of a per-capita nature. Specific budget per-capita figures utilized in detailed projections are identified in Appendix Tables B1 and B2.

#### 4. ON-GOING REVENUE FACTORS

##### (1) Property Taxes

Secured property taxes are based upon a 35.1% City share of the \$1.00 per \$100 assessed valuation property tax rate, as determined from review of Auditor-Controller tax rate allocations documented in Appendix C1. This share compares reasonably closely to property tax relationships evidenced by the City's 1990-91 budget, as follows:

Assessed Value	
Secured	\$146,784,101
Unsecured	<u>5,975,780</u>
Total	152,759,881
 Total Property Tax @ \$1.00 per \$100 AV	 1,527,599
 City Property Taxes per 1990-91 Budget	 495,000
 % Share	 32.4%

The 35.1% factor is an average for sites within the City. Sites within unincorporated County to be annexed will be subject to the standard County-City annexation agreement within Sonoma County, which calls for a property tax equal generally to about 75% of current City levels. In the case of annexation, the City will also receive 100% of tax rate allocations for functions to be assumed by the City, particularly fire protection. Please refer to Appendix Table C1 for a listing of existing tax rate shares within Cloverdale's six tax rate areas (TRA's). The 35.1% factor excludes consideration of redevelopment property tax increments. For specific



development sites within the City's redevelopment project area, higher tax rate shares will be obtained.

Unsecured property taxes are estimated at 10% of secured property taxes, applicable only to commercial and industrial properties. This factor is based upon Southern California averages. No consideration is given to minor personal property taxes attributable to residential usage.

## (2) Sales and Use Taxes

Sales taxes are estimated at 1.09% of taxable sales. This rate includes the following:

- o The statutory 1.00% specified allocation of sales taxes to cities.
- o An additional 0.09%, which is our estimate of additional taxes prorated to cities as their share of "unallocated" taxes, as reported in the SBOE reports.

The basis of this 0.09% estimate is detailed in Appendix Table D1.

## (3) Franchise Fees

Annual franchise fees are estimated at \$20.00 per residential unit and 1.25 cents per square foot of commercial/industrial building space. The residential factor is computed as follows:

- o Cable TV. 3.0% tax rate applied to average monthly bill of \$14 per residential unit, which equates to annual tax of \$5.04 per residential unit.
- o Refuse. 7.0% tax rate applied to average monthly bill of \$11 per residential unit, which equates to \$9.24 per residential unit annual tax.
- o PG&E. 7.0% tax rate applied to average monthly bill of \$18.67, resulting in average annual tax of \$15.72 per residential unit.

The total of these three items is \$20.00 per residential unit per year. To be conservative, we have utilized two-thirds of this amount, a factor of \$20.00 per residential unit per year. The commercial/industrial factor is based on the assumption that a commercial/industrial facility of 1,600 square feet of building space is the equivalent of a residential unit. Thus, the resultant factor is 1.25 cents per square foot of building space (\$20.00 divided by 1,600 square feet).

## (4) Transient Lodging Tax

This tax is computed at the City's present tax rate of 7.00% applicable to room tax revenues. This tax rate is within the 6% to 10% range found among cities elsewhere in the State.

(5) Business License

We have utilized a factor of 5.0 cents per square foot of commercial/ industrial building space. This factor was determined after review of the City's business license structure, which keys business license fees to a flat-rate schedule. The 5.0 cent estimate is based upon two average tenant types, as follows:

- o Retail. Building space of 2,000 square feet; employment of eight; business licence fee of \$112.50; with resultant tax of 5.63 cents per square foot of building space.
- o Office. Building space of 1,000 square feet; tax of \$56.25; with resultant tax rate of 5.62 cents per square foot of building space.

Detailed projections at the 5.0 cent level reflect a rounding down of the above figures.

(6) Property Transfer Tax--Resale

Property transfer taxes are estimated at 7.9 cents per \$1,000 development valuation, to reflect on-going resale of residential units. The 7.9 cent factor is based upon 55 cents per \$1,000 valuation at time of transaction, under the assumption that average resale occurs each seven years. In detailed calculations, this factor has been applied only to single-family sales units. It assumes that multiple-family rental apartments and commercial facilities will not be subject to on-going resale.

(7) Per-Capita Items

The following City revenues are estimated on a per-capita basis, derived from the City's 1990-91 budget, as follows:

	<u>Per Capita</u>
Motor Vehicle In-Lieu	35.32
MTC Article 8 Tax--Street	22.24
State Gas Tax	14.03
MTC Article 4 Tax--Transit	8.71
Vehicle/Criminal Code Fines	3.70
Cigarette Tax	1.88
Recreation Use Fee	1.79
Animal Licenses/Fees	0.64

The above factors are based upon 100% of current budget levels, with the exception of Vehicle/Criminal Code Fines and MTC Article 8 taxes, which are estimated at 50% of current budget levels. See Appendix Table B1 for detailed estimates.

## 5. ON-GOING EXPENDITURE FACTORS

### (1) Fire Protection.

Annual fire protection costs are estimated at:

- o \$100 per residential unit.
- o 6.25 cents per square foot of commercial/industrial building space.

Existing budget cost levels in the City are estimated at \$86.65 per residential unit, as follows:

	<u>Cost Amount</u>	<u># Units</u>	<u>Cost Per Unit</u>
Total Budget	\$321,663		
Less Fee Recovery For Out-of-City Service	138,915		
Net City Cost	182,748	2,109	\$ 86.65

The City fire department serves a total area of 155 square miles and a population estimated by the Fire Chief at 8,000 to 10,000, roughly double the City's population. This service is provided by a combination of full-time and volunteer fire fighters. As the City grows, it is likely that the Fire Department will require additional full-time personnel. Also, it is possible that the City will require either a second station or a relocated single station. The specifics of future fire service can be a consideration in General Plan update decisions.

In reality, the addition of a relatively small number of residential units will not create incremental cost increases to the City Fire Department. However, to provide a measure of the impact of future residential and commercial/industrial growth on fire protection requirements, we have utilized an estimate prepared by the Fire Chief covering maximum City requirements to serve the General Plan study area and provide additional County service as currently contracted. The estimate of full-time employment and resultant payroll costs are as follows:



	# <u>Employees</u>	Annual Payroll Cost <u>Per Empl</u>	Annual <u>Cost</u>
Chief	1.0	\$45,000	\$ 45,000
Assistant Chief	1.0	35,000	35,000
Captain	3.0	33,000	99,000
Engineer	3.0	28,000	84,000
Fire Fighter	6.0	26,000	156,000
Fire Prevention Officer	1.0	33,000	33,000
Security	1.0	15,000	15,000
Mechanic	0.5	20,000	10,000
Total	16.5		477,000

Based on current budget relationships, total operating costs at this operating level would be approximately \$692,000, computed as follows:

Payroll	\$477,000
Overhead @ 45%	<u>215,000</u>
Total	692,000

This level of operations should be able to serve 6,000 to 7,000 residential units, either from a single station or from two stations, with resultant costs in the range of \$99 to \$115 per residential unit. For purposes of this analysis, we have assumed that costs resulting from growth are the aforementioned \$100 per residential unit and 6.25 cents per square foot of commercial/industrial building space. These are highly preliminary figures, subject to additional testing against a General Plan formulation in subsequent Phase 2 analysis.

## (2) Police Protection.

Annual police protection costs are estimated at:

- o \$100 per capita.
- o 16.9 cents per square foot of commercial/industrial building space.

Current budget levels are at \$134.54 per capita, indicated by the following tabulation drawn from Appendix Table B2:

	Amount	Per <u>Capita</u>
Police Patrol	493,572	101.64
Police Dispatch	150,638	31.02
Crossing Guards	<u>9,134</u>	<u>1.88</u>
Total	653,344	134.54



Based on discussions with the Police Chief, it would appear that current levels are significantly influenced by outside activity. For example, approximately 60% of arrests are of non-residents.

To gain a measure of the impact of new development on the community, we obtained an estimate from the Chief of current requirements for a population at or near 5,000 versus those for Cloverdale at a population of 10,000. For this additional increment of approximately 5,000 population, his estimate of additional personnel results in the following estimate of cost requirements:

Personnel	#	Payroll	Amount (\$)
		Cost <u>Per Empl</u>	
Lieutenant	1	\$ 54,300	\$ 54,300
Officer	7	31,500	220,500
Investigation	<u>1</u>	33,100	<u>33,100</u>
Sub Total	9		307,900
Overhead @ 13.3%			<u>41,000</u>
Total			348,900

This cost equates to approximately \$70 per capita. In the interest of conservatism, we have utilized a mid-range figure of \$100 per capita, a figure which is in line with police costs in many cities throughout the State.

The commercial/industrial factor of 16.9 cents per square foot of building space is based upon an equivalent dwelling unit (EDU) approach, wherein it is assumed that each 1,600 square feet of commercial/industrial building space is the equivalent of a single-family residential unit with average unit occupancy of 2.7 residents. The resultant calculation is a cost of \$270 per unit (\$100 per capita multiplied by 2.7 population) divided by 1,600 square feet.

### (3) Animal Control

Annual animal control costs are estimated at \$3.42 per capita, per the City's 1990-91 budget as documented in Appendix Table B2.

### (4) Street Maintenance

Annual street maintenance costs are estimated at \$4,000 per lane-mile. This factor is based primarily on regional experience. The City's existing level of street maintenance costs is somewhat higher, as evidenced by the following calculation:

Budget Costs	\$148,374
# Street Miles	15.1
# Lane Miles	30.2
Cost Per Lane Mile	\$4,913

The above budget costs are drawn from Appendix Table D2, including an allocation of a portion of the Public Works Administration function to street maintenance.

Discussions with the City's Public Works Director indicated that current maintenance costs in the City are high because of the substandard existing conditions of City streets. He estimates that two-thirds of existing City streets are substandard, all streets which were constructed 15 years ago or earlier. As a consequence, we have utilized a lower street maintenance figure for streets to serve new development, streets which will be of a much higher standard than most streets elsewhere in the City.

#### (5) Park Maintenance

Park maintenance is estimated at \$7,000 per finished park acre. This estimate is also based largely on regional experience. The City's current costs are at a higher per-acre level, per the following computation:

Budget Costs	
—97% of Community Facilities	\$97,036
Park Acres	6.5
Cost per Acre	14,929

As new park facilities are constructed in the City, their maintenance should be more in line with regional experience than with current City experience. Park maintenance cost estimates assume that the City will develop 2.5 acres of finished parkland for each 1,000 population—a highly preliminary assumption at this point in the planning process.

#### (6) Recreation Services

This function is primarily concerned with operating the City's swimming pool. Costs of this function are estimated at \$3.32 per capita, based upon the City's current budget, documented in Appendix Table B2.

#### (7) Transit Operations

Transit operations costs are estimated at \$8.71 per capita, also based on the City's current budget. Our analysis assumes that these costs are direct offsets to MTC Article 4 tax funding obtained from the State.

(8) Administration

Administration costs are estimated at 13.0% of other (direct) costs. These administration costs are essentially the City's "overhead" expenses. As indicated in Appendix Table B2, we estimate that the City's current administrative costs are equal to 12.77% of other costs. For a growth city such as Cloverdale, we believe it appropriately conservative to assume that administrative costs will continue to grow directly in proportion to other costs at this current budget level. This percentage factor is in line with similar cost factors for many other cities in the State. This factor, as all others in the analysis, can be readily modified to reflect changes in assumptions that may be desired by the client.

6. ONE-TIME REVENUES AND EXPENDITURES

(1) Development Control

For purposes of this fiscal impact analysis, we have defined development control function to encompass those activities which are directly related to processing new development in the City. Included are various processing functions with the City's Planning, Engineering, and Building Departments. Consistent with commonly accepted fiscal impact analysis methodology, this analysis assumes that the development control functions are breakeven situations; that fees collected will support related direct costs. The City Council is not restricted in establishing fees to this end. This breakeven approach is appropriately conservative. Please refer to Appendix Tables B1 and B2 for budget details. For purposes of gaining perspective as to fee and cost amounts, we have utilized a California prototypical factor of 0.5% of new development value.

(2) Property Transfer Tax—New

Property transfer taxes collected by the City at time of initial sale of residential units are estimated at 55 cents per \$1,000 of new development value. This is the City's 50% share of such taxes. Our analysis assumes that multi-family rental units and commercial properties will not be sold, and thus no taxes are assumed for these properties. This revenue item has no direct expenditure offset.

(3) Park Facilities

This analysis assumes that park facility costs will be equal to the City's current mitigation fee of \$900 per residential unit. On a very rough basis, we estimate that this fee will permit development of approximately 0.75 acre finished park for each 100 residential units, computed as follows:



# Residential Units	100
Park Facilities Fee	\$90,000
Park Facilities Cost Per Acre	
Land	40,000
Improvements	<u>80,000</u>
Total	120,000
# Acres Covered By Fee	0.75

Under an average residential unit occupancy of 2.7, the fee would thus cover park development of approximately 2.78 acres per 1,000 population, computed as follows:

# Residential Units	100
# Residents	
@ 2.7 per unit	270
# Acres of Park	0.75
# Acres per 1,000 Population	2.78

This amount of supportable park acreage is approximately one-half of the 5.0-acre standard currently being considered in the General Plan update process. If the City is to achieve its park standard, we believe it clear that either fees (or developer construction contributions) must be increased or standards must be lowered. These are matters for consideration during the planning process.

#### (4) Thoroughfare Facilities

This analysis assumes that additional thoroughfare costs resulting from new development will be direct offsets to the mitigation fee of \$150 per residential unit. In reality, most new street improvements will be paid as part of the developer planned conditioning process. Irrespective, this is a matter for subsequent consideration during the planning process.

#### (5) Other Capital Facilities

No consideration is given in this Phase I analysis to mitigation fees to cover additional capital costs which may be incurred by the City over time as its General Plan is implemented. Thus costs might be required to cover:

- o A significant rebuilding of the City's existing circulation structure.



- o Costs of a second fire station or an expanded or relocated station.
- o Costs of additional public buildings to house the administrative function.

These are matters which cannot be addressed on a prototypical basis; nor can they be easily related to per capita or per unit growth. They are matters which should be considered to some degree in the ongoing planning process.

## 7. EXCLUDED BUDGET ITEMS

Fiscal projections contained herein specifically exclude the following items contained within the City's budget:

- o Earnings on existing investments, including interest, rents, and concessions.
- o The City's sewer/water enterprise operation.
- o The City's airport operations.
- o Any prospective assessment district revenues and costs incorporated into the City's budget.

Exclusion of these items is consistent with fiscal impact analysis methodology utilized throughout California.

## 8. FINANCIAL MODEL AND PROJECTIONS

A full set of detailed projections illustrating the fiscal model utilized in this analysis is contained in Appendix A, Tables A1-1 through A1-3. This set of projections contains three tables, as follows:

- o Table A1-1. A two-page table presenting fiscal projections, indicating on-going cash flow items on the first page and one-time cash flow items on the second page.
- o Table A1-2. A two-page table presenting physical development measures, including numbers of residential units and land area, commercial building space and land area, public park acreage, street lengths, and flood control facility measures.
- o Table A1-3. A two-page table containing new development measures utilized in the analysis, including population, new development values and related assessed value increases, taxable sales generation, and room sales generation.

These appendix tables have been prepared in a form so that the basis of all computations can be determined without reference to additional documentation. The detailed projections contained herein are in computer program form, utilizing Symphony Spreadsheet programming and approximately 43,000 bytes of computer memory. Our customized computer program is available for subsequent use in Phase 2 of the assignment. In particular, it can be utilized to measure fiscal impacts of alternate development scenarios for major planning areas.

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## APPENDIX

- A Prototypical Use Summaries  
(Table A1: Alternatives P01-P11)
- B City Budget
- C City Tax Rate Shares
- D Unallocated Sales Tax
- E List of Government Officials Contacted





## APPENDIX A

PROTOTYPICAL USE SUMMARIES  
(Table A1: Alternatives 01-12)



Table A1-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative 1: 1-Acre Prototypical  
Single-Family Estate 0.5 Unit/Acre

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Item	Amount (\$)	Reference
12 ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
14 Revenues		
16 Property Tax—Secured	527	35.10 % of 1.00% assessed value increase.
17 Property Tax—Unsecured	0	10.00 % of secured prop tax, comm/ind only.
18 Sales & Use Tax	50	1.0000 % of taxable sales.
19 Transient Occupancy Tax	0	7.00 % Hotel room sales.
20 Business License	0	0.0500 \$ Per SF C/I bldg space.
21 RE Property Transfer Tax—Resale	12	0.0700 \$ Per \$1,000 sale value.
22 Franchise Fees—Residential	10	20.00 \$ Per residential unit.
23 Franchise Fees—Commercial/Industrial	0	0.0125 \$ Per SF building space
24 Motor Vehicle In Lieu	49	35.32 \$ Per capita.
25 Cigarette Tax	3	1.00 \$ Per capita.
26 Vehicle/Criminal Code Fines	5	3.70 \$ Per capita.
27 State Gas Tax	20	14.03 \$ Per capita.
28 MTC Article 8 Tax—Streets	31	22.24 \$ Per capita.
29 MTC Article 4 Tax—Transit	12	8.71 \$ Per capita.
30 Recreation Use Fees	3	1.79 \$ Per capita.
31 Other Revenues	0	0.00 \$ Per capita.
32 Total Revenues	721	
34 Expenditures		
36 Fire Protection—Residential	50	100.00 \$ Per residential unit.
37 Fire Protection—Commercial/Industrial	0	0.0625 \$ Per SF building space.
38 Police Protection—Residential	140	100.00 \$ Per capita.
39 Police Protection—Commercial/Industrial	0	0.169 \$ Per SF building space.
40 Animal Control	5	3.42 \$ Per capita.
41 Street Maintenance	383	4,000 \$ Per lane mile.
42 Park Maintenance (Community Facilities)	25	7,000 \$ Per acre.
43 Recreation Services (Swimming Pool)	5	3.32 \$ Per capita.
44 Transit Operations	12	8.71 \$ Per capita.
45 Administration	70	13.00 % of other costs.
46 Total Expenditures	609	
48 Net Surplus/(Deficit)	112	
50 —Per Residential-Commercial/Industrial Acre	112	
52 —% Surplus/(Deficit) To Expenditures	18.4	



Table A1-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 1. 1-Acre Prototypical  
Single-Family Estate 0.5 Unit/Acre

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01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	750	0.5000 % of new development value.
Property Transfer Tax--New	83	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	450	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	75	150 \$ per residential unit.
Total Revenues	1,358	
Expenditures		
Development Control Costs	750	0.5000 % of new development value.
Park Facilities	450	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	75	150 \$ per residential unit.
Total Expenditures	1,275	
Net Surplus/(Deficit)	83	
---Per Residential-Comm/Ind-Agr Acre (\$)	83	
---% Surplus/(Deficit) To Expenditures	6.5	

129		Quantities/ Amounts		Basis
130	Item			
131				
132				
133	RESIDENTIAL UNITS (U)			
134	Single-Family Estate 0.5 Unit/Acre	0.5	0.5	Per alternative specification.
135	Single-Family Estate 2.0 Units/Acre	0.0	0.0	Per alternative specification.
136	Single-Family Detached 5.0 Units/Acre	0.0	0.0	Per alternative specification.
137	Single-Family Attached 10.0 Units/Acre	0.0	0.0	Per alternative specification.
138	Multi-Family Attached 20.0 Units/Acre	0.0	0.0	Per alternative specification.
139		0.0	0.0	Per alternative specification.
140	Total	0.5		
141				
142	RESIDENTIAL LAND AREA (AC)			
143	Single-Family Estate 0.5 Unit/Acre	1.0	0.5	Units per acre (gross).
144	Single-Family Estate 2.0 Units/Acre	0.0	2.0	Units per acre (gross).
145	Single-Family Detached 5.0 Units/Acre	0.0	5.0	Units per acre (gross).
146	Single-Family Attached 10.0 Units/Acre	0.0	10.0	Units per acre (gross).
147	Multi-Family Attached 20.0 Units/Acre	0.0	20.0	Units per acre (gross).
148				Units per acre (gross).
149	Total	1.0		
150				
151	COMMERCIAL/INDUSTRIAL BUILDING SPACE (SF)			
152	Local Retail	0	0	Per alternative specification.
153	Freeway Retail	0	0	Per alternative specification.
154	Restaurant	0	0	Per alternative specification.
155	Auto Dealership	0	0	Per alternative specification.
156	Hotel	0	450	SF bldg space per room.
157	Rental Office	0	0	Per alternative specification.
158	Light Industry	0	0	Per alternative specification.
159	Golf Clubhouse	0	0	Per alternative specification.
160	Golf Course	0	0	Per alternative specification.
161	Total	0		
162				
163	HOTEL ROOMS (U)	0	0	Per alternative specification.
164				
165	COMMERCIAL/INDUSTRIAL LAND AREA (AC)			
166	Local Retail	0.0	11,000	SF bldg space per acre (gross).
167	Freeway Retail	0.0	11,000	SF bldg space per acre (gross).
168	Restaurant	0.0	8,000	SF bldg space per acre (gross).
169	Auto Dealership	0.0	8,000	SF bldg space per acre (gross).
170	Hotel	0.0	50.0	Rooms per acre (gross).
171	Rental Office	0.0	17,000	SF bldg space per acre (gross).
172	Light Industry	0.0	15,000	SF bldg space per acre (gross).
173	Golf Clubhouse	0.0	10,000	SF bldg space per acre (gross).
174	Golf Course	0.0	0	Per alternative specification.
175	Total	0.0		

Table A1-2 (Continued.....page 2)  
DEVELOPMENT PROGRAM  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 1. 1-Acre Prototypical  
Single-Family Estate 0.5 Unit/Acre

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Item	Quantities/ Amounts	Basis
<b>PUBLIC PARKS TO BE MAINTAINED (AC)</b>		
Single-Family Estate 0.5 Unit/Acre	0.0035	2.50 Acres per 1,000 population.
Single-Family Estate 2.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Single-Family Detached 5.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Single-Family Attached 10.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Multi-Family Attached 20.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
	0.0000	Acres per 1,000 population.
<b>Total</b>	0.0035	
<b>LAND AREA RECAP (AC)</b>		
Residential	1.0	Per above computations.
Commercial/Industrial	0.0	Per above computations.
Public Parks To Be Maintained	0.0	Per above computations.
School	0.0	Per alternative specification.
Open Space/Other	0.0	Per alternative specification.
<b>Total</b>	1.0	
<b>STREET LANE-FEET MAINT BY CITY (#)</b>		
<b>Residential</b>		
Single-Family Estate 0.5 Unit/Acre	400	400 Lane-feet per developed acre.
Single-Family Estate 2.0 Units/Acre	0	350 Lane-feet per developed acre.
Single-Family Detached 5.0 Units/Acre	0	300 Lane-feet per developed acre.
Single-Family Attached 10.0 Units/Acre	0	150 Lane-feet per developed acre.
Multi-Family Attached 20.0 Units/Acre	0	75 Lane-feet per developed acre.
	0	0 Lane-feet per developed acre.
<b>Total Residential</b>	400	
<b>Commercial/Industrial</b>		
Local Retail	0	0 Lane-feet per developed acre.
Freeway Retail	0	0 Lane-feet per developed acre.
Restaurant	0	0 Lane-feet per developed acre.
Auto Dealership	0	0 Lane-feet per developed acre.
Hotel	0	0 Lane-feet per developed acre.
Rental Office	0	0 Lane-feet per developed acre.
Light Industry	0	0 Lane-feet per developed acre.
Golf Clubhouse	0	0 Lane-feet per developed acre.
Golf Course	0	0 Lane-feet per developed acre.
<b>Total Commercial/Industrial</b>	0	
<b>Total</b>	400	
<b>STREET LANE-MILES MAINT BY CITY (#)</b>	0.0758	5,280 Lane-feet per lane-mile.
<b>FLAME CONTROL FACILITIES (LF)</b>	0	No data

Table A1-3  
DEVELOPMENT MEASURES  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 1. 1-Acre Prototypical  
Single-Family Estate 0.5 Unit/Acre

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01/21/91

Quantities/  
Amounts

Basis

Item	Quantities/ Amounts	Basis
POPULATION (#)		
Single-Family Estate 0.5 Unit/Acre	1.4	2.00 Per residential unit.
Single-Family Estate 2.0 Units/Acre	0.0	2.00 Per residential unit.
Single-Family Detached 5.0 Units/Acre	0.0	3.00 Per residential unit.
Single-Family Attached 10.0 Units/Acre	0.0	2.20 Per residential unit.
Multi-Family Attached 20.0 Units/Acre	0.0	1.90 Per residential unit.
	0.0	Per residential unit.
Total	1.4	2.00 Per residential unit.
NEW DEVELOPMENT VALUE (\$)		
Residential		
Single-Family Estate 0.5 Unit/Acre	150,000	300,000 \$ per unit.
Single-Family Estate 2.0 Units/Acre	0	250,000 \$ per unit.
Single-Family Detached 5.0 Units/Acre	0	180,000 \$ per unit.
Single-Family Attached 10.0 Units/Acre	0	120,000 \$ per unit.
Sub-Total Sales Housing	150,000	
Multi-Family Attached 20.0 Units/Acre	0	55,000 \$ per unit.
	0	\$ per unit (@ 9,247/Ac—current AV \$1,248,296; 135 Ac).
Total Residential	150,000	
Commercial/Industrial		
Local Retail	0	100.00 \$ per SF building space.
Freeway Retail	0	100.00 \$ per SF building space.
Restaurant	0	165.00 \$ per SF building space.
Auto Dealership	0	100.00 \$ per SF building space.
Hotel	0	50,000 \$ per SF hotel room.
Rental Office	0	120.00 \$ per SF building space.
Light Industry	0	50.00 \$ per SF building space.
Golf Clubhouse	0	150.00 \$ per SF building space.
Golf Course	0	25,000 \$ per acre of golf course (excluding clubhouse).
Total Commercial/Industrial	0	
Total	150,000	
EXISTING ASSESSED VALUE (\$)	0	0 Disregard.
ASSESSED VALUE INCREASE (\$)	150,000	
RESIDENT ANNUAL TAXABLE PURCH--TOTAL (\$)		
Single-Family Estate 0.5 Unit/Acre	22,947	16,391 Per capita (based on income/housing value relationship)
Single-Family Estate 2.0 Units/Acre	0	13,659 Per capita (based on income/housing value relationship)
Single-Family Detached 5.0 Units/Acre	0	9,179 Per capita (based on income/housing value relationship)
Single-Family Attached 10.0 Units/Acre	0	8,344 Per capita (based on income/housing value relationship)
Multi-Family Attached 20.0 Units/Acre	0	4,420 Per capita (based on income/housing value relationship)
	0	Per capita (based on 150% of regional average).
Total	22,947	



Table A1-3 (Continued.....page 2)  
 DEVELOPMENT MEASURES  
 CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
 (IN 1990 CONSTANT DOLLARS)

Alternative: 1. 1-Acre Prototypical  
 Single-Family Estate 0.5 Unit/Acre

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Item	Quantities/ Amounts	Basis	
RESIDENT ANNUAL TAXABLE PURCHASES—			
NON-PROJECT AREA STORES (\$)	4,589	20.0	% Of Total Purchases.
COMMERCIAL/INDUSTRIAL ESTABLISHMENT			
ANNUAL TAXABLE SALES (\$)			
Local Retail	0	175.00	\$ per SF building space.
Freeway Retail	0	175.00	\$ per SF building space.
Restaurant	0	275.00	\$ per SF building space.
Auto Dealership	0	625.00	\$ per SF building space.
Hotel	0	0.00	\$ per SF building space.
Rental Office	0	0.00	\$ per SF building space.
Light Industry	0	20.00	\$ per SF building space.
Golf Clubhouse	0	75.00	\$ per SF building space.
Golf Course	0	0.00	
Total	0		
EXISTING ANNUAL TAXABLE SALES			
TO CITY OF SANTA PAULA (\$)	0		
NET ANNUAL TAXABLE SALES INCREASE			
TO CITY OF SANTA PAULA (\$)	4,589		
ANNUAL HOTEL ROOM SALES (\$)	0	12,775	\$ Per Hotel Room: Basis—
			Daily Room Rate (\$)
			50.00
			Occupancy Rate (%)
			70.0

Table A2-1

Alternative: 2. 1-Acre Prototypical  
Single-Family Estate 2.0 Units/Acre

127AF202

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01/20/91

SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Item	Amount (\$)	Reference
ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
Revenues		
Property Tax—Secured	1,755	35.100 % of 1.00% assessed value increase.
Property Tax—Unsecured	0	10.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	167	1.0300 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	0	0.0500 \$ Per SF C/I bldg space.
PE Property Transfer Tax—Resale	40	0.0790 \$ Per \$1,000 sale value.
Franchise Fees—Residential	40	20.00 \$ Per residential unit.
Franchise Fees—Commercial/Industrial	0	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	198	35.32 \$ Per capita.
Cigarette Tax	11	1.00 \$ Per capita.
Vehicle/Criminal Code Fines	21	3.70 \$ Per capita.
State Gas Tax	79	14.03 \$ Per capita.
MTC Article 8 Tax—Streets	125	22.24 \$ Per capita.
MTC Article 4 Tax—Transit	49	8.71 \$ Per capita.
Recreation Use Fees	10	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	2,492	
Expenditures		
Fire Protection—Residential	200	100.00 \$ Per residential unit.
Fire Protection—Commercial/Industrial	0	0.0625 \$ Per SF building space.
Police Protection—Residential	560	100.00 \$ Per capita.
Police Protection—Commercial/Industrial	0	0.169 \$ Per SF building space.
Animal Control	19	3.42 \$ Per capita.
Street Maintenance	265	4.00 \$ Per lane mile.
Park Maintenance (Community Facilities)	98	7.000 \$ Per acre.
Recreation Services (Swimming Pool)	19	3.32 \$ Per capita.
Transit Operations	49	8.71 \$ Per capita.
Administration	157	13.00 % of other costs.
Total Expenditures	1,367	
Net Surplus/(Deficit)	1,125	
—Per Residential-Commercial/Industrial Acre	1,125	
—% Surplus/(Deficit) To Expenditures	82.3	

Table A2-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 2. 1-Acre Prototypical  
Single-Family Estate 2.0 Units/Acre

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01/20/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	2,500	0.5000 % of new development value.
Property Transfer Tax—New	275	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	1,800	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	300	150 \$ per residential unit.
Total Revenues	4,875	
Expenditures		
Development Control Costs	2,500	0.5000 % of new development value.
Park Facilities	1,800	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	300	150 \$ per residential unit.
Total Expenditures	4,600	
Net Surplus/(Deficit)	275	
—Per Residential-Comm/Ind-Agr Acre (\$)	275	
—% Surplus/(Deficit) To Expenditures	6.0	

Table A3-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 3. 1-Acre Prototypical  
Single-Family Detached 5.0 Units/Acre

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SL387  
01/21/91

Item	Amount (\$)	Reference
12 OUT-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
14 Revenues		
16 Property Tax—Secured	3,159	35.100 % of 1.00% assessed value increase.
17 Property Tax—Unsecured	0	18.00 % of secured prop tax, comm/ind only.
18 Sales & Use Tax	300	1.0000 % of taxable sales.
19 Transient Occupancy Tax	0	7.00 % Hotel room sales.
20 Business License	0	0.0500 \$ Per SF C/I bldg space.
21 RE Property Transfer Tax—Resale	71	0.0700 \$ Per \$1,000 sale value.
22 Franchise Fees—Residential	100	20.00 \$ Per residential unit.
23 Franchise Fees—Commercial/Industrial	0	0.0125 \$ Per SF building space
24 Motor Vehicle In Lieu	530	35.32 \$ Per capita.
25 Cigarette Tax	28	1.88 \$ Per capita.
26 Vehicle/Criminal Code Fines	56	3.70 \$ Per capita.
27 State Gas Tax	210	14.03 \$ Per capita.
28 MTC Article 8 Tax—Streets	334	22.24 \$ Per capita.
29 MTC Article 4 Tax—Transit	131	8.71 \$ Per capita.
30 Recreation Use Fees	27	1.79 \$ Per capita.
31 Other Revenues	0	0.00 \$ Per capita.
32 Total Revenues	4,945	
34 Expenditures		
36 Fire Protection—Residential	500	100.00 \$ Per residential unit.
37 Fire Protection—Commercial/Industrial	0	0.0625 \$ Per SF building space.
38 Police Protection—Residential	1,500	100.00 \$ Per capita.
39 Police Protection—Commercial/Industrial	0	0.169 \$ Per SF building space.
40 Animal Control	51	3.42 \$ Per capita.
41 Street Maintenance	227	4.000 \$ Per lane mile.
42 Park Maintenance (Community Facilities)	263	7.000 \$ Per acre.
43 Recreation Services (Swimming Pool)	50	3.32 \$ Per capita.
44 Transit Operations	131	8.71 \$ Per capita.
45 Administration	354	13.00 % of other costs.
46 Total Expenditures	3,075	
48 Net Surplus/(Deficit)	1,870	
50 —Per Residential-Commercial/Industrial Acre	1,870	
52 —% Surplus/(Deficit) To Expenditures	60.8	



Table A3-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 3. 1-Acre Prototypical  
Single-Family Detached 5.0 Units/Acre

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SL287  
01/01/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	4,500	0.5000 % of new development value.
Property Transfer Tax--New	495	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	4,500	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	750	150 \$ per residential unit.
Total Revenues	10,245	
Expenditures		
Development Control Costs	4,500	0.5000 % of new development value.
Park Facilities	4,500	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	750	150 \$ per residential unit.
Total Expenditures	9,750	
Net Surplus/(Deficit)	495	
—Per Residential-Comm/Ind-Agr Acre (\$)	495	
—% Surplus/(Deficit) To Expenditures	5.1	

Table AA-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 4. 1-Acre Prototypical  
Single-Family Attached 10.0 Units/Acre

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SL387  
01/21/91

Item	Amount (\$)	Reference
ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
Revenues		
Property Tax—Secured	4,212	35.100 % of 1.00% assessed value increase.
Property Tax—Unsecured	0	10.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	800	1.0900 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	0	0.0500 \$ Per SF C/I bldg space.
RE Property Transfer Tax—Resale	95	0.0790 \$ Per \$1,000 sale value.
Franchise Fees—Residential	200	20.00 \$ Per residential unit.
Franchise Fees—Commercial/Industrial	0	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	777	35.32 \$ Per capita.
Cigarette Tax	41	1.88 \$ Per capita.
Vehicle/Criminal Code Fines	81	3.70 \$ Per capita.
State Gas Tax	389	14.83 \$ Per capita.
MTC Article 8 Tax—Streets	489	22.24 \$ Per capita.
MTC Article 4 Tax—Transit	192	8.71 \$ Per capita.
Recreation Use Fees	39	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	7,236	
Expenditures		
Fire Protection—Residential	1,000	100.00 \$ Per residential unit.
Fire Protection—Commercial/Industrial	0	0.0625 \$ Per SF building space.
Police Protection—Residential	2,200	100.00 \$ Per capita.
Police Protection—Commercial/Industrial	0	0.169 \$ Per SF building space.
Animal Control	75	3.42 \$ Per capita.
Street Maintenance	114	4.000 \$ Per lane mile.
Park Maintenance (Community Facilities)	385	7.000 \$ Per acre.
Recreation Services (Swimming Pool)	73	3.32 \$ Per capita.
Transit Operations	192	8.71 \$ Per capita.
Administration	525	13.00 % of other costs.
Total Expenditures	4,564	
Net Surplus/(Deficit)	2,672	
—Per Residential-Commercial/Industrial Acre	2,672	
—X Surplus/(Deficit) To Expenditures	58.6	

Table A4-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 4. 1-Acre Prototypical  
Single-Family Attached 10.0 Units/Acre

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SL287  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	6,000	0.5000 % of new development value.
Property Transfer Tax--New	660	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	9,000	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	1,500	150 \$ per residential unit.
Total Revenues	17,160	
Expenditures		
Development Control Costs	6,000	0.5000 % of new development value.
Park Facilities	9,000	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	1,500	150 \$ per residential unit.
Total Expenditures	16,500	
Net Surplus/(Deficit)	660	
--Per Residential-Comm/Ind-Agr Acre (\$)	660	
--% Surplus/(Deficit) To Expenditures	4.0	

Table AS-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 5. 1-Acre Prototypical  
Multi-family Attached 20.0 Units/Acre

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SL387  
01/21/91

Item	Amount (\$)	Reference
ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
Revenues		
Property Tax—Secured	3,861	35.100 % of 1.00% assessed value increase.
Property Tax—Unsecured	0	10.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	367	1.0300 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	0	0.0500 \$ Per SF C/I bldg space.
RE Property Transfer Tax—Resale	0	0.0790 \$ Per \$1,000 sale value.
Franchise Fees—Residential	400	20.00 \$ Per residential unit.
Franchise Fees—Commercial/Industrial	0	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	1,342	35.32 \$ Per capita.
Cigarette Tax	71	1.88 \$ Per capita.
Vehicle/Criminal Code Fines	141	3.70 \$ Per capita.
State Gas Tax	533	14.03 \$ Per capita.
MTC Article 8 Tax—Streets	845	22.24 \$ Per capita.
MTC Article 4 Tax—Transit	331	8.71 \$ Per capita.
Recreation Use Fees	68	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	7,959	
Expenditures		
Fire Protection—Residential	2,000	100.00 \$ Per residential unit.
Fire Protection—Commercial/Industrial	0	0.0625 \$ Per SF building space.
Police Protection—Residential	3,800	100.00 \$ Per capita.
Police Protection—Commercial/Industrial	0	0.169 \$ Per SF building space.
Animal Control	130	3.42 \$ Per capita.
Street Maintenance	57	4,000 \$ Per lane mile.
Park Maintenance (Community Facilities)	665	7,000 \$ Per acre.
Recreation Services (Swimming Pool)	126	3.32 \$ Per capita.
Transit Operations	331	8.71 \$ Per capita.
Administration	924	13.00 % of other costs.
Total Expenditures	8,033	
Net Surplus/(Deficit)	(74)	
—Per Residential—Commercial/Industrial Acre	(74)	
—% Surplus/(Deficit) To Expenditures	(0.9)	



Table A5-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 5. 1-Acre Prototypical  
Multi-Family Attached 20.0 Units/Acre

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SL387  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	5,500	0.5000 % of new development value.
Property Transfer Tax—New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	18,000	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	3,000	150 \$ per residential unit.
Total Revenues	26,500	
Expenditures		
Development Control Costs	5,500	0.5000 % of new development value.
Park Facilities	18,000	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	3,000	150 \$ per residential unit.
Total Expenditures	26,500	
Net Surplus/(Deficit)	0	
—Per Residential-Comm/Ind-Agr Acre (\$)	0	
—% Surplus/(Deficit) To Expenditures	0.0	

Table A6-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 5. 1-Acre Prototypical  
Local Retail

1274F206  
SL387  
01/21/91

Item	Amount (1)	Reference
12 ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
14 Revenues		
16 Property Tax—Secured	3,861	35.100 % of 1.00% assessed value increase.
17 Property Tax—Unsecured	386	10.00 % of secured prop tax, comm/ind only.
18 Sales & Use Tax	20,983	1.0900 % of taxable sales.
19 Transient Occupancy Tax	0	7.00 % Hotel room sales.
20 Business License	550	0.0500 \$ Per SF C/I bldg space.
21 RE Property Transfer Tax—Resale	0	0.0790 \$ Per \$1,000 sale value.
22 Franchise Fees—Residential	0	20.00 \$ Per residential unit.
23 Franchise Fees—Commercial/Industrial	138	0.0125 \$ Per SF building space
24 Motor Vehicle In Lieu	0	35.32 \$ Per capita.
25 Cigarette Tax	0	1.88 \$ Per capita.
26 Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
27 State Gas Tax	0	14.03 \$ Per capita.
28 MTC Article 8 Tax—Streets	0	22.24 \$ Per capita.
29 MTC Article 4 Tax—Transit	0	8.71 \$ Per capita.
30 Recreation Use Fees	0	1.79 \$ Per capita.
31 Other Revenues	0	0.00 \$ Per capita.
32 Total Revenues	25,917	
34 Expenditures		
36 Fire Protection—Residential	0	100.00 \$ Per residential unit.
37 Fire Protection—Commercial/Industrial	688	0.0625 \$ Per SF building space.
38 Police Protection—Residential	0	100.00 \$ Per capita.
39 Police Protection—Commercial/Industrial	1,856	0.169 \$ Per SF building space.
40 Animal Control	0	3.42 \$ Per capita.
41 Street Maintenance	0	4,000 \$ Per lane mile.
42 Park Maintenance (Community Facilities)	0	7,000 \$ Per acre.
43 Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
44 Transit Operations	0	8.71 \$ Per capita.
45 Administration	331	13.00 % of other costs.
46 Total Expenditures	2,874	
48 Net Surplus/(Deficit)	23,043	
50 —Per Residential-Commercial/Industrial Acre	23,043	
52 —% Surplus/(Deficit) To Expenditures	801.6	

Table A6-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 6. 1-Acre Prototypical  
Local Retail

1274F206  
SL387  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	5,500	0.5000 % of new development value.
Property Transfer Tax—New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	5,500	
Expenditures		
Development Control Costs	5,500	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	5,500	
Net Surplus/(Deficit)	0	
—Per Residential-Comm/Ind-Agr Acre (\$)	0	
—% Surplus/(Deficit) To Expenditures	0.0	

Table A7-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 7. 1-Acre Prototypical  
Freeway Retail

1274F207  
SL387  
01/21/91

Item	Amount (\$)	Reference
ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
Revenues		
Property Tax--Secured	3,861	35.100 % of 1.00% assessed value increase.
Property Tax--Unsecured	386	10.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	20,983	1.0900 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	550	0.0500 \$ Per SF C/I bldg space.
RE Property Transfer Tax--Resale	0	0.0790 \$ Per \$1,000 sale value.
Franchise Fees--Residential	0	20.00 \$ Per residential unit.
Franchise Fees--Commercial/Industrial	138	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	0	35.32 \$ Per capita.
Cigarette Tax	0	1.88 \$ Per capita.
Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
State Gas Tax	0	14.03 \$ Per capita.
MTC Article 8 Tax--Streets	0	22.24 \$ Per capita.
MTC Article 4 Tax--Transit	0	8.71 \$ Per capita.
Recreation Use Fees	0	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	25,917	
Expenditures		
Fire Protection--Residential	0	100.00 \$ Per residential unit.
Fire Protection--Commercial/Industrial	688	0.0625 \$ Per SF building space.
Police Protection--Residential	0	100.00 \$ Per capita.
Police Protection--Commercial/Industrial	1,856	0.169 \$ Per SF building space.
Animal Control	0	3.42 \$ Per capita.
Street Maintenance	0	4.000 \$ Per lane mile.
Park Maintenance (Community Facilities)	0	7.000 \$ Per acre.
Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
Transit Operations	0	8.71 \$ Per capita.
Administration	331	13.00 % of other costs.
Total Expenditures	2,874	
Net Surplus/(Deficit)	23,043	
--Per Residential-Commercial/Industrial Acre	23,043	
--% Surplus/(Deficit) To Expenditures	801.6	



Table A7-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 7. 1-Acre Prototypica?  
Freeway Retail

1274F207  
SL387  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	5,500	0.5000 % of new development value.
Property Transfer Tax—New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	5,500	
Expenditures		
Development Control Costs	5,500	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	5,500	
Net Surplus/(Deficit)	0	
—Per Residential-Comm/Ind-Agr Acre (\$)	0	
—% Surplus/(Deficit) To Expenditures	0.0	

Table A8-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: B. 1-Acre Prototypical  
Restaurant

1274F208  
SL387  
01/21/91

Item	Amount (\$)	Reference
ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
Revenues		
Property Tax—Secured	4,633	35.100 % of 1.00% assessed value increase.
Property Tax—Unsecured	463	10.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	23,900	1.0900 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	400	0.0500 \$ Per SF C/I bldg space.
RE Property Transfer Tax—Resale	0	0.0790 \$ Per \$1,000 sale value.
Franchise Fees—Residential	0	20.00 \$ Per residential unit.
Franchise Fees—Commercial/Industrial	100	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	0	35.32 \$ Per capita.
Cigarette Tax	0	1.88 \$ Per capita.
Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
State Gas Tax	0	14.03 \$ Per capita.
MTC Article 8 Tax—Streets	0	22.24 \$ Per capita.
MTC Article 4 Tax—Transit	0	8.71 \$ Per capita.
Recreation Use Fees	0	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	29,577	
Expenditures		
Fire Protection—Residential	0	100.00 \$ Per residential unit.
Fire Protection—Commercial/Industrial	500	0.0625 \$ Per SF building space.
Police Protection—Residential	0	100.00 \$ Per capita.
Police Protection—Commercial/Industrial	1,350	0.169 \$ Per SF building space.
Animal Control	0	3.42 \$ Per capita.
Street Maintenance	0	4,000 \$ Per lane mile.
Park Maintenance (Community Facilities)	0	7,000 \$ Per acre.
Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
Transit Operations	0	8.71 \$ Per capita.
Administration	241	13.00 % of other costs.
Total Expenditures	2,091	
Net Surplus/(Deficit)	27,486	
—Per Residential-Commercial/Industrial Acre	27,486	
---% Surplus/(Deficit) To Expenditures	1,314.0	

Table A0-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 8, 1-Acre Prototypical  
Restaurant

1274F208  
SL387  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	6,600	0.5000 % of new development value.
Property Transfer Tax--New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	6,600	
Expenditures		
Development Control Costs	6,600	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	6,600	
Net Surplus/(Deficit)	0	
---Per Residential-Comm/Ind-Agr Acre (\$)	0	
---% Surplus/(Deficit) To Expenditures	0.0	

Table A9-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 9. 1-Acre Prototypical  
Auto Dealership

1274F209  
SL387  
01/21/91

Item	Amount (\$)	Reference
12 ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
14 Revenues		
16 Property Tax—Secured	2,888	35.100 % of 1.00% assessed value increase.
17 Property Tax—Unsecured	281	10.00 % of secured prop tax, comm/ind only.
18 Sales & Use Tax	54,500	1.0000 % of taxable sales.
19 Transient Occupancy Tax	0	7.00 % Hotel room sales.
20 Business License	400	0.0500 \$ Per SF C/I bldg space.
21 RE Property Transfer Tax—Resale	0	0.0790 \$ Per \$1,000 sale value.
22 Franchise Fees—Residential	0	20.00 \$ Per residential unit.
23 Franchise Fees—Commercial/Industrial	100	0.0125 \$ Per SF building space
24 Motor Vehicle In Lieu	0	35.32 \$ Per capita.
25 Cigarette Tax	0	1.88 \$ Per capita.
26 Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
27 State Gas Tax	0	14.03 \$ Per capita.
28 MTC Article 8 Tax—Streets	0	22.24 \$ Per capita.
29 MTC Article 4 Tax—Transit	0	8.71 \$ Per capita.
30 Recreation Use Fees	0	1.79 \$ Per capita.
31 Other Revenues	0	0.00 \$ Per capita.
32 Total Revenues	58,089	
34 Expenditures		
36 Fire Protection—Residential	0	100.00 \$ Per residential unit.
37 Fire Protection—Commercial/Industrial	500	0.0625 \$ Per SF building space.
38 Police Protection—Residential	0	100.00 \$ Per capita.
39 Police Protection—Commercial/Industrial	1,350	0.1688 \$ Per SF building space.
40 Animal Control	0	3.42 \$ Per capita.
41 Street Maintenance	0	4,000 \$ Per lane mile.
42 Park Maintenance (Community Facilities)	0	7,000 \$ Per acre.
43 Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
44 Transit Operations	0	8.71 \$ Per capita.
45 Administration	241	13.00 % of other costs.
46 Total Expenditures	2,091	
48 Net Surplus/(Deficit)	55,998	
50 —Per Residential-Commercial/Industrial Acre	55,938	
52 —% Surplus/(Deficit) To Expenditures	2,678.7	



Table A9-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 9. 1-Acre Prototypical  
Auto Dealership

1274F209  
SL387  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	4,000	0.5000 % of new development value.
Property Transfer Tax--New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	4,000	
Expenditures		
Development Control Costs	4,000	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	4,000	
Net Surplus/(Deficit)	0	
---Per Residential-Comm/Ind-Agr Acre (\$)	0	
---% Surplus/(Deficit) To Expenditures	0.0	

Table A10-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 10. 1-Acre Prototypical  
Hotel

1274F210  
SL287  
01/21/91

Item	Amount (\$)	Reference
<b>ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)</b>		
<b>Revenues</b>		
Property Tax—Secured	8,775	35.10 % of 1.00% assessed value increase.
Property Tax—Unsecured	878	18.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	0	1.0900 % of taxable sales.
Transient Occupancy Tax	44,713	7.00 % Hotel room sales.
Business License	1,125	0.0500 \$ Per SF C/I bldg space.
RE Property Transfer Tax—Resale	0	0.0790 \$ Per \$1,000 sale value.
Franchise Fees—Residential	0	20.00 \$ Per residential unit.
Franchise Fees—Commercial/Industrial	281	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	0	35.32 \$ Per capita.
Cigarette Tax	0	1.88 \$ Per capita.
Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
State Gas Tax	0	14.83 \$ Per capita.
MTC Article 8 Tax—Streets	0	22.24 \$ Per capita.
MTC Article 4 Tax—Transit	0	8.71 \$ Per capita.
Recreation Use Fees	0	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
<b>Total Revenues</b>	<b>55,771</b>	
<b>Expenditures</b>		
Fire Protection—Residential	0	100.00 \$ Per residential unit.
Fire Protection—Commercial/Industrial	1,406	0.0625 \$ Per SF building space.
Police Protection—Residential	0	100.00 \$ Per capita.
Police Protection—Commercial/Industrial	3,797	0.169 \$ Per SF building space.
Animal Control	0	3.42 \$ Per capita.
Street Maintenance	0	4,000 \$ Per lane mile.
Park Maintenance (Community Facilities)	0	7,000 \$ Per acre.
Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
Transit Operations	0	8.71 \$ Per capita.
Administration	676	13.00 % of other costs.
<b>Total Expenditures</b>	<b>5,888</b>	
<b>Net Surplus/(Deficit)</b>	<b>49,882</b>	
—Per Residential-Commercial/Industrial Acre	49,882	
—% Surplus/(Deficit) To Expenditures	848.6	

Table A10-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 10. 1-Acre Prototypical  
Hotel

1274F210  
SL387  
01/21/91

Item	Amount (\$)	Reference
<b>ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)</b>		
<b>Revenues</b>		
Development Control Fees	12,500	0.5000 % of new development value.
Property Transfer Tax—New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	12,500	
<b>Expenditures</b>		
Development Control Costs	12,500	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	12,500	
Net Surplus/(Deficit)	0	
—Per Residential-Comm/Ind-Agr Acre (\$)	0	
—% Surplus/(Deficit) To Expenditures	0.0	

Table A11-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 11. 1-Acre Prototypical  
Rental Office

1274F211  
SL387  
01/21/91

Item	Amount (\$)	Reference	
<b>ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)</b>			
<b>Revenues</b>			
Property Tax—Secured	7,160	35.10	% of 1.00% assessed value increase.
Property Tax—Unsecured	716	10.00	% of secured prop tax, comm/ind only.
Sales & Use Tax	0	1.0300	% of taxable sales.
Transient Occupancy Tax	0	7.00	% Hotel room sales.
Business License	850	0.0500	\$ Per SF C/I bldg space.
RE Property Transfer Tax—Resale	0	0.0790	\$ Per \$1,000 sale value.
Franchise Fees—Residential	0	20.00	\$ Per residential unit.
Franchise Fees—Commercial/Industrial	213	0.0125	\$ Per SF building space
Motor Vehicle In Lieu	0	35.32	\$ Per capita.
Cigarette Tax	0	1.80	\$ Per capita.
Vehicle/Criminal Code Fines	0	3.70	\$ Per capita.
State Gas Tax	0	14.03	\$ Per capita.
MTC Article 8 Tax—Streets	0	22.24	\$ Per capita.
MTC Article 4 Tax—Transit	0	8.71	\$ Per capita.
Recreation Use Fees	0	1.79	\$ Per capita.
Other Revenues	0	0.00	\$ Per capita.
Total Revenues	8,939		
<b>Expenditures</b>			
Fire Protection—Residential	0	100.00	\$ Per residential unit.
Fire Protection—Commercial/Industrial	1,063	0.0625	\$ Per SF building space.
Police Protection—Residential	0	100.00	\$ Per capita.
Police Protection—Commercial/Industrial	2,869	0.1600	\$ Per SF building space.
Animal Control	0	3.42	\$ Per capita.
Street Maintenance	0	4,000	\$ Per lane mile.
Park Maintenance (Community Facilities)	0	7,000	\$ Per acre.
Recreation Services (Swimming Pool)	0	3.32	\$ Per capita.
Transit Operations	0	8.71	\$ Per capita.
Administration	511	13.00	% of other costs.
Total Expenditures	4,442		
Net Surplus/(Deficit)	4,497		
—Per Residential-Commercial/Industrial Acre	4,497		
—% Surplus/(Deficit) To Expenditures	101.2		

Table A11-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 11. 1-Acre Prototypical  
Rental Office

1274F211  
SL387  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	10,200	0.5000 % of new development value.
Property Transfer Tax—New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	10,200	
Expenditures		
Development Control Costs	10,200	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	10,200	
Net Surplus/(Deficit)	0	
—Per Residential—Comm/Ind-Agr Acre (%)	0	
—X Surplus/(Deficit) To Expenditures	0.0	



Table A12-1  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternatives: 12. 1-Acre Prototypical  
Light Industry

1274F212  
SL387  
01/21/91

Item	Amount (\$)	Reference
ON-GOING CASH FLOW (ANNUAL @ FULL BUILDOUT)		
Revenues		
Property Tax--Secured	2,633	35.10 % of 1.00% assessed value increase.
Property Tax--Unsecured	263	10.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	3,270	1.0900 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	750	0.0500 \$ Per SF C/I bldg space.
RE Property Transfer Tax--Resale	0	0.0790 \$ Per \$1,000 sale value.
Franchise Fees--Residential	0	20.00 \$ Per residential unit.
Franchise Fees--Commercial/Industrial	188	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	0	35.32 \$ Per capita.
Cigarette Tax	0	1.68 \$ Per capita.
Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
State Gas Tax	0	14.03 \$ Per capita.
MTC Article 8 Tax--Streets	0	22.24 \$ Per capita.
MTC Article 4 Tax--Transit	0	8.71 \$ Per capita.
Recreation Use Fees	0	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	7,103	
Expenditures		
Fire Protection--Residential	0	100.00 \$ Per residential unit.
Fire Protection--Commercial/Industrial	938	0.0625 \$ Per SF building space.
Police Protection--Residential	0	100.00 \$ Per capita.
Police Protection--Commercial/Industrial	2,531	0.169 \$ Per SF building space.
Animal Control	0	3.42 \$ Per capita.
Street Maintenance	0	4,000 \$ Per lane mile.
Park Maintenance (Community Facilities)	0	7,000 \$ Per acre.
Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
Transit Operations	0	8.71 \$ Per capita.
Administration	451	13.00 % of other costs.
Total Expenditures	3,920	
Net Surplus/(Deficit)	3,184	
--Per Residential-Commercial/Industrial Acre	3,184	
--% Surplus/(Deficit) To Expenditures	81.2	

Table A12-1 (Continued.....page 2)  
SUMMARY ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 12. 1-Acre Prototypical  
Light Industry

1274F212  
SL287  
01/21/91

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	3,750	0.5000 % of new development value.
Property Transfer Tax—New	0	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	0	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	0	150 \$ per residential unit.
Total Revenues	3,750	
Expenditures		
Development Control Costs	3,750	0.5000 % of new development value.
Park Facilities	0	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	0	150 \$ per residential unit.
Total Expenditures	3,750	
Net Surplus/(Deficit)	0	
—Per Residential-Comm/Ind-Agr Acre (\$)	0	
—X Surplus/(Deficit) To Expenditures	0.0	

Table A13-1  
SUMMER ANNUAL & ONE-TIME CASH FLOW  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1998 CONSTANT DOLLARS)

Alternative: 1. Future Prototypical  
Single-Family Estate 1.8 Unit/44-Acre

12747213  
SUS  
02/13/91

Item	Amount (\$)	Reference
<b>ON-GOING CASH FLOW (ANNUAL &amp; FULL BUILDOUT)</b>		
<b>Revenues</b>		
Property Tax—Secured	31	35.10 % of 1.00% assessed value increase.
Property Tax—Unsecured	0	18.00 % of secured prop tax, comm/ind only.
Sales & Use Tax	3	1.0902 % of taxable sales.
Transient Occupancy Tax	0	7.00 % Hotel room sales.
Business License	0	0.0500 \$ Per SF C/I bldg space.
RC Property Transfer Tax—Resale	1	0.0790 \$ Per \$1,000 sale value.
Franchise Fees—Residential	1	26.00 \$ Per residential unit.
Franchise Fees—Commercial/Industrial	0	0.0125 \$ Per SF building space
Motor Vehicle In Lieu	2	35.30 \$ Per capita.
Cigarette Tax	0	1.86 \$ Per capita.
Vehicle/Criminal Code Fines	0	3.70 \$ Per capita.
State Gas Tax	1	14.63 \$ Per capita.
MTC Article 6 Tax—Streets	2	22.24 \$ Per capita.
MTC Article 4 Tax—Transit	1	8.71 \$ Per capita.
Recreation Use Fees	0	1.79 \$ Per capita.
Other Revenues	0	0.00 \$ Per capita.
Total Revenues	41	
<b>Expenditures</b>		
Fire Protection—Residential	3	100.00 \$ Per residential unit.
Fire Protection—Commercial/Industrial	0	0.0625 \$ Per SF building space.
Police Protection—Residential	7	100.00 \$ Per capita.
Police Protection—Commercial/Industrial	0	0.169 \$ Per SF building space.
Animal Control	0	3.42 \$ Per capita.
Street Maintenance	25	4,000 \$ Per lane mile.
Park Maintenance (Community Facilities)	1	7,000 \$ Per acre.
Recreation Services (Swimming Pool)	0	3.32 \$ Per capita.
Transit Operations	1	8.71 \$ Per capita.
Administration	5	13.00 % of other costs.
Total Expenditures	42	
Net Surplus/(Deficit)	(1)	
—Per Residential-Commercial/Industrial Acre	(1)	
—% Surplus/(Deficit) To Expenditures	(1.5)	

60 Continued on next page.....

Item	Amount (\$)	Reference
ONE-TIME CASH FLOW (DURING DEVELOPMENT PERIOD)		
Revenues		
Development Control Fees	44	0.5000 % of new development value.
Property Transfer Tax--New	5	0.550 \$ per \$1,000 of new development value.
Park Improvement Fee	23	900 \$ per residential unit.
Fire Facility Fee	0	0 \$ per residential unit.
Public Facilities Fee	0	0 \$ per residential unit.
Thoroughfare Improvement Fee	4	150 \$ per residential unit.
Total Revenues	76	
Expenditures		
Development Control Costs	44	0.5000 % of new development value.
Park Facilities	23	900 \$ per residential unit.
Fire Facilities	0	0 \$ per residential unit.
Public Facilities	0	0 \$ per residential unit.
Thoroughfare Improvements	4	150 \$ per residential unit.
Total Expenditures	70	
Net Surplus/(Deficit)	5	
--Per Residential-Comm/Ind-Agr Acre (\$).	5	
--% Surplus/(Deficit) To Expenditures	6.9	

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Table F12-2  
DEVELOPMENT PROGRAM  
CLACKAMAS GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1994 CONSTANT DOLLARS)

Alternative 1: 1-Acre Anticipated  
Single-Family Estate 1.0 Unit/Acre

1274/202  
S-387  
02/13/91

127  
128  
129  
130 Item

Quantities/  
Amounts

Basis

131  
132

133 RESIDENTIAL UNITS (#)

134 Single-Family Estate 1.0 Unit/Acre	0.025	0.025	Per alternative specification.
135 Single-Family Estate 0.5 Unit/Acre	0.000	0.500	Per alternative specification.
136 Single-Family Estate 2.0 Units/Acre	0.000	0.000	Per alternative specification.
137 Single-Family Detached 5.0 Units/Acre	0.000	0.000	Per alternative specification.
138 Single-Family Attached 10.0 Units/Acre	0.000	0.000	Per alternative specification.
139 Multi-Family Attached 20.0 Units/Acre	0.000	0.000	Per alternative specification.
140	0.000	0.000	Per alternative specification.
141 Total	0.025		

142

143 RESIDENTIAL LAND AREA (AC)

144 Single-Family Estate 1.0 Unit/Acre	1.0	0.025	Units per acre (gross).
145 Single-Family Estate 0.5 Unit/Acre	0.0	0.500	Units per acre (gross).
146 Single-Family Estate 2.0 Units/Acre	0.0	2.000	Units per acre (gross).
147 Single-Family Detached 5.0 Units/Acre	0.0	5.000	Units per acre (gross).
148 Single-Family Attached 10.0 Units/Acre	0.0	10.000	Units per acre (gross).
149 Multi-Family Attached 20.0 Units/Acre	0.0	20.000	Units per acre (gross).
150			Units per acre (gross).
151 Total	1.0		

152

153 COMMERCIAL/INDUSTRIAL BUILDING SPACE (SF)

154 Local Retail	0	0	Per alternative specification.
155 Freeway Retail	0	0	Per alternative specification.
156 Restaurant	0	0	Per alternative specification.
157 Auto Dealership	0	0	Per alternative specification.
Hotel	0	450	SF bldg space per room.
158 Rental Office	0	0	Per alternative specification.
159 Light Industry	0	0	Per alternative specification.
160 Golf Clubhouse	0	0	Per alternative specification.
161 Golf Course	0	0	Per alternative specification.
162 Total	0		

164

165 HOTEL ROOMS (#)

166	0	0	Per alternative specification.
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167 COMMERCIAL/INDUSTRIAL LAND AREA (AC)

168 Local Retail	0.0	11,000	SF bldg space per acre (gross).
169 Freeway Retail	0.0	11,000	SF bldg space per acre (gross).
170 Restaurant	0.0	8,000	SF bldg space per acre (gross).
171 Auto Dealership	0.0	8,000	SF bldg space per acre (gross).
172 Hotel	0.0	50.0	Rooms per acre (gross).
173 Rental Office	0.0	17,000	SF bldg space per acre (gross).
174 Light Industry	0.0	15,000	SF bldg space per acre (gross).
175 Golf Clubhouse	0.0	10,000	SF bldg space per acre (gross).
176 Golf Course	0.0	0	Per alternative specification.
177 Total	0.0		

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180 Continued on next page.....



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Table A13-2 (Continued).....Page 2.  
DEVELOPMENT PROGRAM  
CLOVERDALE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative 1: 1-form Motor Vehicle  
Single-family Estate 1.0 Unit/40-Acre

1074011  
SL387  
02/13/91

Quantities/  
Amounts

Basis

PUBLIC PARKS TO BE MAINTAINED (AC)

Single-family Estate 1.0 Unit/40-Acre	0.0000	2.50 Acres per 1,000 population.
Single-family Estate 0.5 Unit/Acre	0.0000	2.50 Acres per 1,000 population.
Single-family Estate 2.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Single-family Detached 5.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Single-family Attached 10.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Multi-family Attached 20.0 Units/Acre	0.0000	2.50 Acres per 1,000 population.
Total	0.0000	Acres per 1,000 population.

LAND AREA RECAP (AC)

Residential	1.0	Per above computations.
Commercial/Industrial	0.0	Per above computations.
Public Parks To Be Maintained	0.0	Per above computations.
School	0.0	Per alternative specification.
Open Space/Other	0.0	Per alternative specification.
Total	1.0	

STREET LANE-FEET MAINT BY CITY (#)

Residential

Single-family Estate 1.0 Unit/40-Acre	33	33 Lane-feet per developed acre.
Single-family Estate 0.5 Unit/Acre	0	400 Lane-feet per developed acre.
Single-family Estate 2.0 Units/Acre	0	350 Lane-feet per developed acre.
Single-family Detached 5.0 Units/Acre	0	300 Lane-feet per developed acre.
Single-family Attached 10.0 Units/Acre	0	150 Lane-feet per developed acre.
Multi-family Attached 20.0 Units/Acre	0	75 Lane-feet per developed acre.
Total Residential	33	0 Lane-feet per developed acre.

Commercial/Industrial

Local Retail	0	0 Lane-feet per developed acre.
Freeway Retail	0	0 Lane-feet per developed acre.
Restaurant	0	0 Lane-feet per developed acre.
Auto Dealership	0	0 Lane-feet per developed acre.
Hotel	0	0 Lane-feet per developed acre.
Rental Office	0	0 Lane-feet per developed acre.
Light Industry	0	0 Lane-feet per developed acre.
Golf Clubhouse	0	0 Lane-feet per developed acre.
Golf Course	0	0 Lane-feet per developed acre.
Total Commercial/Industrial	0	

Total	33	
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STREET LANE-MILES MAINT BY CITY (#)

0.0063	5,280 Lane-feet per lane-mile.
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FLOOD CONTROL FACILITIES (LF)

0	No data.
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Source: STA, Inc.; The Levander Company, Inc.

Table A13-3  
DEVELOPMENT MEASURES  
LIVERMORE GENERAL PLAN UPDATE FISCAL IMPACTS  
(IN 1990 CONSTANT DOLLARS)

Alternative: 1. 1-Acre Prototypical  
Single-family Estate 1.0 Unit/40-Acre

12747213  
SL387  
02/13/91

	Quantities/ Amounts	Basis
-acre	0.070	2.00 Per residential unit.
re	0.000	2.00 Per residential unit.
cre	0.000	2.00 Per residential unit.
/acre	0.000	3.00 Per residential unit.
s/acre	0.000	2.20 Per residential unit.
/acre	0.000	1.90 Per residential unit.
	0.000	Per residential unit.
	0.070	2.00 Per residential unit.
1-acre	0,750	350,000
re	0	300,000 \$ per unit.
acre	0	250,000 \$ per unit.
s/acre	0	180,000 \$ per unit.
/s/acre	0	120,000 \$ per unit.
	0,750	
s/acre	0	55,000 \$ per unit.
	0,750	
	0	100.00 \$ per SF building space.
	0	100.00 \$ per SF building space.
	0	165.00 \$ per SF building space.
	0	100.00 \$ per SF building space.
	0	50,000 \$ per SF hotel room.
	0	120.00 \$ per SF building space.
	0	50.00 \$ per SF building space.
	0	150.00 \$ per SF building space.
	0	25,000 \$ per acre of golf course (excluding clubhouse).
	0	
	0,750	
	0	0 Disregard.
	0,750	
AL (\$)		
1-acre	1,339	19,122 Per capita (based on income/housing value relationship)
acre	0	16,391 Per capita (based on income/housing value relationship)
acre	0	13,659 Per capita (based on income/housing value relationship)
s/acre	0	9,179 Per capita (based on income/housing value relationship)
ts/acre	0	6,344 Per capita (based on income/housing value relationship)
s/acre	0	4,420 Per capita (based on income/housing value relationship)
	0	Per capita (based on 150% of regional average).
	1,339	

Item	Quantities/ Amounts	Basis	
RESIDENT ANNUAL TAXABLE PURCHASES—			
NON-PROJECT AREA STORES (\$)	266	20.0	% Of Total Purchases
COMMERCIAL/INDUSTRIAL ESTABLISHMENT			
ANNUAL TAXABLE SALES (\$)			
Local Retail	0	175.00	\$ per SF building space.
Freeway Retail	0	175.00	\$ per SF building space.
Restaurant	0	275.00	\$ per SF building space.
Auto Dealership	0	625.00	\$ per SF building space.
Hotel	0	8.00	\$ per SF building space.
Rental Office	0	8.00	\$ per SF building space.
Light Industry	0	20.00	\$ per SF building space.
Golf Clubhouse	0	75.00	\$ per SF building space.
Golf Course	0	0.00	
Total	0		
EXISTING ANNUAL TAXABLE SALES			
TO CITY OF SANTA PAULA (\$)	0		
NET ANNUAL TAXABLE SALES INCREASE			
TO CITY OF SANTA PAULA (\$)	266		
ANNUAL HOTEL ROOM SALES (\$)	0	12,775	\$ Per Hotel Room: Basis—
		Daily Room Rate (\$)	56.00
		Occupancy Rate (%)	78.0

Source: STR, Inc.; The Levander Company, Inc.

APPENDIX B

CITY BUDGET





Table B1  
1990-91 BUDGET ANALYSIS—REVENUES  
CITY OF CLOVERDALE

1274BUD1  
03/14/90  
SL356

Budget Activity	City Budget		Budget Per Capita Used In Projections	
	Amount	Per Capita	Amount	Basis
	(\$)	(\$)	(\$)	
<b>GENERAL FUND</b>				
Property Tax (All)	510,035	105.03		
Sales & Use Tax	365,000	75.16		
Transient Occupancy Tax	43,000	8.86		
Business License Tax	36,000	7.41		
RE Property Transfer Tax	13,000	2.68		
Franchise Fees (All)	39,600	8.15		
Motor Vehicle In Lieu Tax	171,535	35.32	35.32	100 % Of Budget
Cigarette Tax	9,140	1.88	1.88	100 % Of Budget
Sonoma County Fire Contract	130,915	28.61		
Special Studies	95,000	19.56		
Interest Income	82,000	16.89		
Development Control Fees (Various)	201,850	41.57		
All Other	55,070	11.34		
Total General Fund	1,760,145	362.47		
<b>RESTRICTED FUNDS</b>				
<b>Police</b>				
Vehicle/Criminal Code Fines	35,900	7.39	3.78	50 % Of Budget
Asset Forfeiture	3,000	0.62		
Total Police	38,900	8.01		
<b>Pub Wks—State Gas Tax</b>				
2106	27,450	5.65	5.65	100 % Of Budget
2107	40,690	8.38	8.38	100 % Of Budget
2107.5	1,000	0.21		
Interest	5000	1.03		
Total Gas Tax	74,140	15.27	14.03	
Pub Wks—MTC Article B	216,000	44.48	22.24	50 % Of Budget
Public Works—Other	266,830	54.95		
Total Public Works	556,970	114.70		
<b>Parks &amp; Recreation</b>				
Park Improvements	74,700	15.38		
Use Fees	8,700	1.79	1.79	100 % Of Budget
Total PAR	83,400	17.17		
Water Fund	498,235	102.60		
Sewer Fund	554,700	114.23		
Airport Fund	65,140	13.41		
Transit Fund				
MTC Article A Funds	42,320	8.71	8.71	100 % Of Budget
Farebox Collections	3,800	0.78		
Total Transit	46,120	9.50		
Property Tax Debt Service	202,335	41.67		
Redevelopment	201,000	41.39		
Total Restricted Funds	2,246,800	462.69		
Grand Total All Funds	4,006,945	825.15		
Population—January 1990	4,856			

Table B2  
1990-91 BUDGET ANALYSIS—EXPENDITURES  
CITY OF CLOVERDALE

1274RM.D1  
09/14/90  
SL356

Budget Activity	Personnel Expense	Operating Expense	Capital Outlay	Dept Realloc	Total	Direct Cost By Function					Indirect Cost	Per Cap	Budget Per Capita	
						% Direct Cost	Devel Control	Other Impacted	Other Not Impacted	Total		Direct Cost Only	Amount (\$)	Used In Projections Basis
71 City Council	15,140	4,370	0		19,510	0.0		0		0	19,510	0.00		
72 City Clerk	9,420	7,260	0		16,680	0.0		0		0	16,680	0.00		
73 Treasurer	600	0	0		600	0.0		0		0	600	0.00		
74 General Administration	79,800	47,835	1,500		128,415	0.0		0		0	128,415	0.00		
75 Planning	49,492	183,550	930		233,972	66.7	159,981			159,981	79,991	32.95		
76 Fire	190,638	84,900	46,125		321,663	100.0		321,663		321,663	0	66.24		
77 General Services	0	177,390	5,900		183,370	50.0		91,685		91,685	91,685	18.88		
78 Police Patrol	425,936	56,938	10,638		493,572	100.0		493,572		493,572	0	101.64		
79 Police Dispatch	142,300	2,170	6,168		150,638	100.0		150,638		150,638	0	31.02		
80 Animal Control	0	16,600	0		16,600	100.0		16,600		16,600	0	3.42	3.42	100 % Of Budget
81 Crossing Guard	8,593	535	0		9,134	100.0		9,134		9,134	0	1.88		
82 Public Work Admin/Bldg	22,576	38,350	465	(6,815)	54,576	77.0	21,012	21,012		42,024	12,552	8.65		
83 Streets & Roads	55,339	64,311	24,635	4,009	148,374	100.0		148,374		148,374	0	30.55		
84 Community Facilities	57,219	40,032	0	2,726	100,037	100.0		100,037		100,037	0	20.60		
85 Swimming Pool	13,405	2,640	0		16,125	100.0		16,125		16,125	0	3.32		
86 Transit	34,225	8,095	0		42,320	100.0		42,320		42,320	0	8.71	8.71	100 % Of Budget
87 Water	170,009	155,942	113,305		439,336	100.0			439,336	439,336	0	90.47		
88 Sewer	168,065	122,150	154,750		444,965	100.0			444,965	444,965	0	91.63		
89 Airport	0	57,150	32,130		89,280	100.0			89,280	89,280	0	18.39		
90 Redevelopment	70,657	91,690	0		170,347	100.0			170,347	170,347	0	35.00		
92 Total	1,520,920	1,167,968	396,626	0	3,085,514	88.7	180,993	1,411,160	1,143,928	2,735,081	349,433	563.44		
94 % to Total Direct Cost					112.77					100.00	12.77			
96 Per Capita	313.20	240.52	81.68	0.00	635.40		37.27	290.60	235.57	563.44	71.96	563.44		

Police Dispatch operating expense is net, after charge of \$25,000 to Fire Department.

Table C1  
PROPERTY TAX RATE ALLOCATIONS 1990-91  
CITY OF CLOVERDALE

1274TR81  
09/14/90  
SL356

Tax Rate Area	Allocation Share (%)	1990-91 AV (\$000's)	Weighting Factor (\$)
001-000	39.98	33,887	13,548
001-001	38.98	52,139	20,324
001-007	21.97	19,199	4,218
001-011	38.98	27,523	10,728
001-012	38.98	6,865	2,676
001-013	21.97	18,996	4,173
Total		158,609	55,668
Weighted Average	35.10		

Source: Sonoma County Auditor-Controller; The Levander Company, Inc.

Table D:  
UNALLOCATED TAXABLE SALES  
AT STATE AND SONOMA COUNTY LEVELS

1274571  
09/11/90  
SL256

	1985	1986	1987	1988	1989	Total
	\$000's					
STATE OF CALIFORNIA						
Total Taxable Sales	206,809,128	214,910,748	232,564,584	249,755,187		904,039,647
Sales Identifiable to a County Location	201,442,691	209,066,759	226,519,384	243,480,785		880,509,619
Net Unallocated Sales	5,366,437	5,843,989	6,045,200	6,274,402		23,530,028
SONOMA COUNTY						
Total Taxable Sales	2,547,183	2,670,573	2,890,987	3,126,291		11,235,034
Sales Identifiable to a City or Unincorporated Area Location	2,381,856	2,525,740	2,720,735	2,940,249		10,568,580
Net Unallocated Sales	165,327	144,833	170,252	186,042		666,454
% UNALLOCATED TO IDENTIFIABLE						
State of California	2.66	2.80	2.67	2.58		2.67
Sonoma County	6.94	5.73	6.26	6.33		6.31
Total	9.61	8.53	8.93	8.90		8.98

Appendix E

LIST OF GOVERNMENTAL OFFICIALS CONTACTED

CITY OF CLOVERDALE

Frederick L. Browne  
Phil Cann  
Rob Dailey  
John Doble  
Carol E. Giovanatto  
Joseph C. Heckel  
Jim Miner

Director of Public Works  
Public Works Department  
Police Chief  
City Council  
Finance Director  
Planning Director  
Fire Chief

SONOMA COUNTY

Nadine W. Irwin

Tax Accounting Manager





**APPENDIX E**  
**MARKET ANALYSIS**



# DRAFT

PRELIMINARY EVALUATION  
OF  
CLOVERDALE NEW DEVELOPMENT POTENTIALS

Prepared For  
STA, Inc.

September 19, 1990

Prepared By  
Natelson Levander Whitney, Inc.  
1815 Via El Prado, Suite 308  
Redondo Beach, California 90277  
(213) 540-1549

- o Discussions with staff of STA, Inc. concerning overall planning requirements.
- o Interview with Mr. Joe C. Heckel, Planning Director of the City of Cloverdale, concerning existing conditions in the City and various land-use issues, accomplished during our extensive personal inspection of the City and the study area.
- o Inspections of two local housing projects and interviews with sales personnel.

In addition, we have drawn upon our experience in the preparation of market and financial analyses throughout the State, including extensive estimates of prototypical development measures (densities, development values, taxable sales generation, etc.).

After our initial research in the City, it became apparent that the principal issues for us to address are potential commercial and industrial development. With respect to commercial development, it also became apparent that our analysis should not duplicate work directed specifically to the City's downtown improvement plan. While our research provides measures of overall commercial development potentials--some of which are applicable to the downtown--and also residential and industrial development potentials, we have accordingly directed principal comments in this report to non-downtown commercial and industrial development potentials.

Several of the statistical presentations included in this report are in computer program form. We will be available to work with STA Planning, Inc. in utilizing these programs to prepare revisions as might be appropriate.

This report is summary in nature, including the Executive Summary in Section 1 immediately following. An appendix section to this report contains extensive statistical back-up material. Additional research data are available from our files upon request.

## 1. EXECUTIVE SUMMARY

### (1) Freeway Commercial Development

We recommend that the City's number one planning priority be directed towards the establishment of a 20-acre to 30-acre freeway commercial area at the prospective Highway 101 Freeway central interchange. Similar development should be discouraged at the north and south interchanges. Initial attention should be directed toward sites on the west side of the freeway, to provide linkage with Cloverdale Boulevard and the downtown nearby to the north.

Specific uses to encourage include service station, restaurant and fast food, mini-market, and hotel/motel facilities. These are high tax



producers from the City's fiscal standpoint. Further, we judge that they will be highly compatible with the upgrading of the downtown. They will provide additional visitors to the nearby area. They will not be directly competitive with facilities of the type contemplated for downtown.

We judge that market potentials are available to support the 20-acre to 30-acre complex. Current average daily traffic on Highway 101 at Cloverdale exceeds that found at Coalinga along Interstate 5 in the San Joaquin Valley, where such facilities are found at several major locations. We see no evidence of similar development between Cloverdale and Santa Rosa.

## (2) Industrial Development

The City's number two priority should be to encourage industrial development. We believe a realistic absorption target is five acres of new development per year. Possibly a high-end target would be ten acres per year. The five acre target would lead to annual development of approximately 75,000 square feet of building space, to be occupied by 100 to 125 industrial workers.

The industrial development market is available from the 4-County region, where we estimate that industrial development has averaged 80 acres to 100 acres per year. One-half to two-thirds of this development has been in Sonoma County. Cloverdale's attainment of industrial development will require availability of sites and adequate promotion, matters which will require further detailed planning.

## (3) Downtown Redevelopment

We recommend that the City continue to encourage downtown development as contemplated in the recently prepared Downtown Specific Plan. We foresee the downtown's principal role to be:

- o Primarily providing local serving commercial facilities, including retail and office.
- o With the possibility—but no assurance—of creating a visitor attraction center, drawing upon the many thousands of visitors who come to the North County area each year, particularly in connection with visitation of the wine industry.

The creation of a specialty visitor center is difficult to predict. We certainly encourage an attempt to create such a center. Irrespective, the physical size of the downtown commercial complex should remain relatively small if it is to achieve the City's desired environmental impact. Local serving commercial facilities have but a modest projected growth as indicated herein and also in the Downtown Specific Plan.

#### (4) Residential Development

We recommend encouragement of continued residential development to provide greater economic stability to the community. We project a long term average residential development of:

- o 100 units annually within a 2.5-mile market area ring.
- o 125 units annually within a 5.0-mile ring
- o 150 units annually within a 10.0-mile ring.

It would be realistic to anticipate that 25% to 35% of these units will be of a multiple-family type, either rental or condo/PUD sales type.

#### (5) Fiscal and Planning Considerations

Under separate cover, we have prepared an analysis of fiscal impacts of various land uses on City finances. While residential development is shown to pay its way, clearly the principal highest cash generators to the City are commercial facilities—particularly hotel/motel and retail. Essentially, the City does not require additional residential development for fiscal health. Thus, the City can be highly selective in approving types of residential development which meet planning objectives. On the other hand, the City needs to take what is probably a more flexible stance in encouraging and controlling commercial and industrial development. While aesthetic controls are needed, they need to be realistic in relation to the marketplace. These are matters for detailed consideration in subsequent planning.

### 2. CLOVERDALE GENERAL PLAN STUDY AREA

#### (1) Study Area Boundaries

Study area boundaries are identified in Exhibit 1. The total area includes the existing City of Cloverdale, the remainder of the City's sphere-of-influence area, and additional lands outside of the City's existing sphere-of-influence area.

#### (2) Land Area and Developable Sites

Total land area within the study area is estimated by STA, Inc. at 4,142 acres. STA, Inc. estimates that 1,700 acres of land within the City's sphere-of-influence area is vacant and developable. No parallel figure for the total study area has been estimated at this point.

Irrespective, at this stage of our analysis we have not considered specific site opportunities. It is clear that the study area contains a large amount of vacant property, ample for new development of all types for many years hence.

Exhibit 1

CLOVERDALE GENERAL PLAN UPDATE  
STUDY AREA

(To Follow)



### (3) Highway 101 Traffic Counts

Highway 101 traffic counts in the immediate Cloverdale area and nearby Geyserville and Healdsburg are estimated by Caltrans as follows:

	<u>Average Daily Traffic (ADT)</u>	
	<u>Annual Average</u>	<u>Peak Month</u>
Cloverdale		
@ Cherry Creek Road	26,500	30,000
@ South Cloverdale Blvd	26,500	30,000
@ North Cloverdale Blvd	27,000	30,000
Geyserville		
@ Canyon Road	16,700	21,600
Healdsburg		
@ Dry Creek Road	23,100	30,000

We view these counts of 25,000-plus to be high for a rural interstate location. As discussed subsequently in Section 6, they compare favorably with counts on Interstate 5 in the Central Valley in terms of potential commercial impacts.

### (4) Downtown Specific Plan

The City's recently prepared Specific Plan for the downtown covers an eight block area, which we estimate from rough map scaling at approximately 60 acres of land area. As we view the plan, the downtown is to provide two principal functions:

- o Local serving commercial, including retail and office (general and financial).
- o Specialty attractions quite possibly appealing to the visitor market, including a wine museum, auto museum, Indian museum, bed and breakfast establishments, etc.

As envisioned, downtown Cloverdale can be a highly desirable commercial complex. As discussed earlier, our analysis is directed primarily to non-downtown uses. However, we foresee a great degree of compatibility between potential commercial/industrial development elsewhere in the City and downtown objectives.

## 3. REGIONAL ECONOMIC GROWTH

For purposes of this analysis, we have concentrated attention on Sonoma County and a 4-County region, including Sonoma, Mendocino, Lake, and Napa Counties. As indicated in Table 1, our estimates reflect the following

Table 1  
SUMMARY POPULATION & HOUSING PROJECTIONS  
CLOVERDALE MARKET AREAS & 4-COUNTY REGION

	<sup>a</sup> 4-County Region	<sup>b</sup> —Cloverdale Market Area—		
		2.5-Mile Ring	5.0-Mile Ring	10.0-Mile Ring
POPULATION (#)				
1990	630,000	5,600	6,000	9,000
1995	715,000	6,900	7,625	10,950
2000	801,000	8,200	9,250	12,900
2005	887,400	9,500	10,875	14,850
2010	973,200	10,800	12,500	16,800
Average Annual Increase				
90-95	17,160	260	325	390
95-00	17,160	260	325	390
00-05	17,160	260	325	390
05-10	17,160	260	325	390
OCCUPIED HOUSING UNITS (#)				
1990	271,000	2,210	2,370	3,490
1995	304,000	2,710	2,935	4,240
2000	337,000	3,210	3,620	4,990
2005	370,000	3,710	4,245	5,740
2010	403,000	4,210	4,870	6,490
Average Annual Increase				
90-95	6,600	100	125	150
95-00	6,600	100	125	150
00-05	6,600	100	125	150
05-10	6,600	100	125	150

<sup>a</sup> Sonoma, Mendocino, Lake & Napa Counties.

<sup>b</sup> Rings from Highway 101 & First Street.



annual growth measures for the period from 1990 through 2010:

- o 6,600 occupied housing units per year.
- o An average housing occupancy of 2.60 population per unit.
- o A resultant annual population increase of 17,160.

Detailed estimates are contained in Appendix Table B1. As shown in this appendix table, we also estimate that per-capita income of residents of the 4-County region will gradually increase over time, reflecting impact of occupancy of higher valued housing by the substantial number of persons projected to migrate into the 4-County region. More specifically, per-capita income is projected to increase by approximately 16% between 1990 and 2010, as measured by 1990 constant dollars—from a current level of \$13,802 to a future level of \$15,988.

Concurrent with population and housing increases, the 4-County region is realizing substantial increases in employment. As indicated in Appendix Table C4, these levels of employment increase on an annual basis have been as follows:

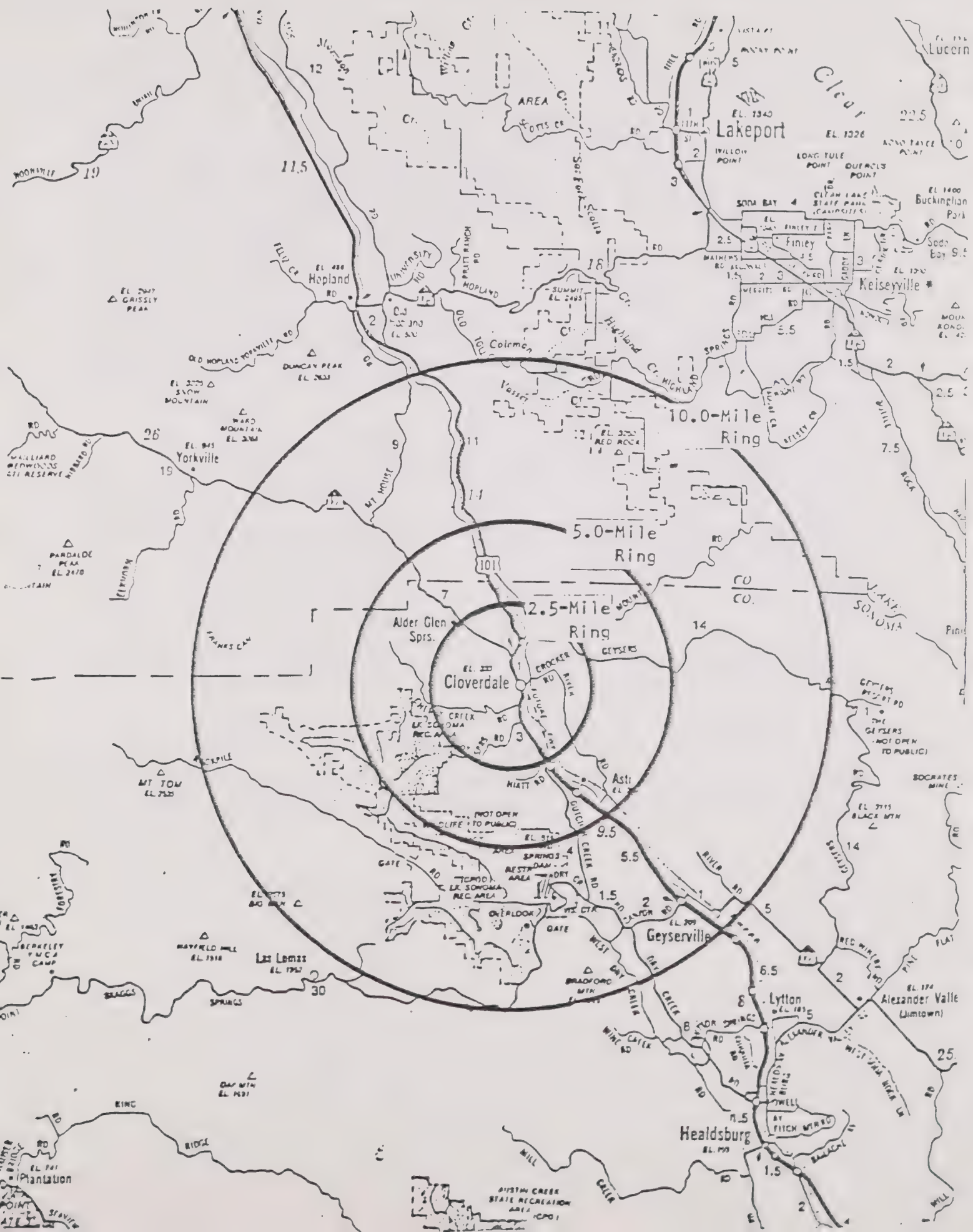
1980-85 (Average)	5,380
1985-86	5,275
1986-87	9,500
1987-88	13,275
1988-89	7,425
1989-90	10,475
1985-90 (Average)	9,190

A major portion of these increases are keyed to manufacturing and other industrially related jobs. We believe it reasonable to assume that employment growth in the 4-County region will continue at a level of 7,000 to 9,000 jobs annually for the next five to ten years.

The above judgements reflect our review of detailed demographic data contained in Appendix C. We will be pleased to discuss our underlying rationale with you in more detail after you have had an opportunity to review this initial document.

#### 4. CLOVERDALE MARKET AREA ECONOMIC GROWTH

This analysis considers the three market areas identified in Exhibit 2. As indicated, these three market areas are rings drawn from the intersection of Highway 101 and First Street. These market areas apply principally to local commercial service. Essentially, the 10.0-mile ring reflects the City's existing retail trade area, excluding consideration of service stations and other traveler-serving facilities. As discussed subsequently, other commercial and industrial facilities can draw upon a broader market.





Population and housing projections for these three market areas are also presented in foregoing Table 1. These projections reflect our judgement that the 10.0-mile ring will obtain approximately 1.5% of 4-County housing growth in the years ahead, a figure somewhat higher than its existing housing share of 0.82%. While growth projections for the 10.0-mile ring are not large by regional standards, they reflect a substantial increase in market share in the years ahead. In particular, the projections for the 2.5-mile ring reflect the substantial degree of residential development which has been occurring in the City during the past several years and which may be expected to continue.

Per-capita incomes for residents of the three market areas are also projected to increase in the years ahead—as measured by 1990 constant dollars—reflecting the impact of occupancy of newer higher valued housing. These rising income factors are reflected in subsequent estimates of retail purchasing power. Please refer to Appendix Table B1 for detailed housing, population, and per-capita income projections.

## 5. LOCAL COMMERCIAL DEMAND MEASURES

### (1) Retail Purchasing Power

Detailed estimates of retail purchasing power are summarized in Table 2 for each of the three market area rings and further detailed in Appendix Tables E2a through E2c. Projections have been made for each of the eleven major retail categories regularly reported by the State Board of Equalization. Purchasing power estimates are made on a dual basis:

- o In terms of 1990 constant dollars, based upon regional per-capita purchase estimates adjusted for local area income levels.
- o Supportable building space, based on prototypical sales requirements of California retailers.

As indicated in Table 2, current supportable building space and increases in supportable building space during the next 20 years are estimated as follows:



Table 2  
CLOVERDALE MARKET AREA RETAIL PURCHASING POWER  
SUMMARY PROJECTIONS

	<sup>a</sup> — 2.5-Mile Ring —		<sup>a</sup> — 5.0-Mile Ring —		<sup>a</sup> — 10.0-Mile Ring —	
	Average Annual Increase 1990	90-10	Average Annual Increase 1990	90-10	Average Annual Increase 1990	90-10
<hr/>						
PURCHASES	<hr/> \$000's <hr/>					
Apparel	1,753	127	1,878	158	2,857	190
General Merchandise	4,331	313	4,641	391	7,061	470
Drug	827	60	886	75	1,349	90
Food	6,973	504	7,472	630	11,368	756
Liquor	387	28	414	35	630	42
Eating & Drinking	3,961	286	4,244	358	6,457	430
Home Furnish & Appl	1,641	119	1,759	148	2,676	178
Building & Farm	2,711	196	2,905	245	4,419	294
Automotive	6,338	458	6,791	573	10,332	687
Service Station	2,415	175	2,587	218	3,936	262
Other Retail	3,812	276	4,085	345	6,215	413
Total	35,149	2,541	37,660	3,177	57,299	3,812
<hr/>						
SUPPORTABLE BUILDING SPACE	<hr/> 000's Square Feet <hr/>					
Apparel	6.8	0.6	9.4	0.8	14.3	1.0
General Merchandise	21.7	1.6	23.2	2.0	35.3	2.3
Drug	4.1	0.3	4.4	0.4	6.7	0.4
Food	11.6	0.8	12.5	1.1	18.9	1.3
Liquor	1.9	0.1	2.1	0.2	3.2	0.2
Eating & Drinking	13.2	1.0	14.1	1.2	21.5	1.4
Home Furnish & Appl	6.2	0.6	6.8	0.7	13.4	0.9
Building & Farm	13.6	1.0	14.5	1.2	22.1	1.5
Automotive	8.5	0.6	9.1	0.8	13.8	0.9
Service Station	1.2	0.1	1.3	0.1	2.0	0.1
Other Retail	19.1	1.4	20.4	1.7	31.1	2.1
Total	111.8	8.1	119.8	10.1	182.2	12.1

<sup>a</sup>  
Rings from Highway 101 & First Street.



	<u>1990</u>	<u>Average Annual Increase</u>
	- - - - - SF - - - - -	
2.5-mile Ring	111,800	8,100
5.0-mile Ring	119,500	10,100
10.0-Mile Ring	182,200	12,100

As indicated, total retail growth of the market areas is projected at relatively small levels, roughly 8,000 to 12,000 square feet annually. These demands derived from Cloverdale's local market areas will not be sufficient to permit the introduction of several major store types. This is because certain store types require sizing which would not be practical in Cloverdale. For example, a junior department store often requires 30,000 square feet of building space or more. An automobile dealer generally requires sales of \$10 million per year or more. Many chain retailers require building space sizing of 5,000 square feet or more directed towards a specialized market. Overall, we judge that much of the demand indicated by Table 2 will not be realizable in the foreseeable future in Cloverdale. That portion which will be realized will be primarily of a localized convenience nature, and will be best directed towards downtown improvement.

## (2) Local Office Demand

Local office demand estimates for the three market area rings are contained in Appendix Table B3. These estimates cover office space occupied by individuals or companies serving a local market area, divided into three categories:

- o General office users, including real estate brokers, insurance brokers, accountants, engineers, etc.
- o Financial offices, principally banks and savings and loan establishments.
- o Medical practitioners.

As indicated in Appendix Table B3, current supportable building space during the next 20 years are estimated as follows:

	<u>1990</u>	<u>Average Annual Increase</u>
	- - - - -SF- - - - -	
2.5-Mile Ring	36,100	1,680
5.0-Mile Ring	38,700	2,100
10.0-Mile Ring	58,900	2,550

These demands are also modest in relation to potential development areas. As with local retail demands, we judge that local office demands will have applicability principally towards downtown improvement.

#### 6. FREEWAY COMMERCIAL DEMAND MEASURES

We judge that Cloverdale has an excellent opportunity to capture a significant freeway commercial complex during the next several years. Of particular importance to this conclusion are existing traffic counts. As noted in Section 2, existing traffic counts in Cloverdale are in the range of 26,500 to 30,000 ADT (Average Daily Traffic). This level of traffic compares favorably from a commercial standpoint with traffic found in the San Joaquin Valley. As examples, traffic at key Buttonwillow and Coalinga intersections are estimated by Caltrans as follows:

	<u>Average Daily Traffic (ADT)</u>	
	<u>Annual Average</u>	<u>Peak Month</u>
Buttonwillow		
@ Highway 58 North	21,500	27,500
@ Highway 58 South	19,800	27,500
Coalinga		
@ Highway 198	21,800	29,000

Major commercial complexes are found at each of these two major intersections, with facilities including several each of service stations, fast food establishments, hotel/motels, etc.

We judge that the Cloverdale location is suitable for a substantial amount of such development. While Cloverdale is not midway between Los Angeles and San Francisco as are the Buttonwillow and Coalinga locations, it nevertheless is almost 100 miles north of San Francisco and located within a major segment of the Wine Country. Subject to detailed testing with individual retail chains, we believe a reasonable freeway commercial development target for general plan update consideration at this time is as follows:

	<u>#</u> <u>Etab</u>	<u>Land</u> <u>Area</u> <u>(Acres)</u>
Service Station	4	8.0
Fast Food	4	3.0
Restaurant	2	3.0
Mini-Market	2	2.0
Hotel (Motel 300 Rooms)	3	<u>6.0</u>
Total		22.0

The land area above reflects relatively low density development. Quite possibly the same facilities could be placed on smaller site configurations. Irrespective, we believe it worth considering development of 20 acres to 30 acres of freeway commercial facilities during the next five to ten years.

We also strongly recommend that such facilities be directed towards the central interchange, with primary emphasis given to sites on the west side of the freeway. This will permit interconnection of these facilities with nearby Cloverdale Boulevard and downtown commercial facilities to the north. In our view, such freeway commercial facilities will not be directly competitive with other establishments within the community. Rather, they will be complimentary.

#### 7. SPECIAL VISITOR FACILITIES

Special visitor facilities are essentially of a specialty commercial nature, aimed at tourist visitation. Such facilities are a logical component in Cloverdale's commercial planning, recognizing the large amount of wine industry visitation throughout the 4-County area. The downtown specific plan lists a number of reasonable visitation measures which are pertinent. We concur that tourism is a highly possible component to be pursued in the downtown.

However, we want to suggest caution in subsequent planning that major reliance is not placed on such facilities. Specialty visitor facilities are very difficult to predict. Quite possibly a very large visitor complex could be developed by a enterprising entrepreneur. However, we know of no means by which the City can direct such action nor insure such success of such action. We strongly suggest encouragement of tourist related facilities but have no basis for making specific quantitative estimates of attainable building space and related land area requirements. It would appear to us that as a first priority the City should aim to achieve such facilities in the downtown area, to the extent that appropriate sites or existing buildings can be found.



## 8. INDUSTRIAL DEMAND MEASURES

Industrial demand cannot be measured as readily as can local retail or office demands. A major portion of industrial demand will be keyed to attracting outside industry into the community. A key measure of this demand is recent employment growth in the 4-County region, as detailed in Appendix Table C4. As indicated in this appendix table, employment growth in the 4-County region during the past five years has averaged 9,190 annually, detailed as follows:

	<u>#</u> <u>Employees</u>	<u>% of</u> <u>Total</u>
* Services	2,545	27.7%
Retail Trade	2,080	22.6
* Construction	1,225	13.3
* Manufacturing	965	10.5
Government	885	9.6
Agriculture/Mining	475	5.2
* Wholesale Trade	465	5.1
Transportation & Public Utilities	345	3.8
Financial, Insurance & Real Estate	205	2.2
Total	9,190	100.0
* Possible Industrial Sectors	5,200	57.2

Industrial facilities will draw in particular upon manufacturing growth. However, there will be opportunity to obtain portions of growth in the services, construction, and wholesale trade sectors as well. We estimate that more than 1,800 of the employees of the above annual growth would require approximately 1.5 million square feet of building space annually, computed as follows:

	<u>%</u> <u>Indus</u>	<u>#</u> <u>Employees</u>	<u>Bldg Sp</u> <u>Per Empl</u> <u>(SF)</u>	<u>Bldg</u> <u>Space</u> <u>(SF)</u>
Manufacturing	100%	965	600	579,000
Wholesale	100	465	1,400	651,000
Construction	20	245	800	441,000
Tran/Comm/Util	10	35	800	28,000
Services	5	127	800	102,000
Total		1,837		1,500,000

At an average building density of 15,000 square feet per acre, this growth would imply 4-County demand of approximately 100 acres annually.

Another useful measure is provided by recent building permit data compiled in Appendix Table C3c. These data are obtained on the basis of dollar valuations. From these data, we have estimated building space based on an average per-square-foot valuation factor. These data indicate that

industrial growth during the past five years has averaged about 1.6 million square feet annually, a figure close to that derived from employment.

As indicated in Appendix Table C3c, Cloverdale has shown zero industrial development activity during the past five years as measured by industrial building permit valuations. Thus, any significant new development cannot be based upon past trends. On the other hand, a number of site areas within Cloverdale would be well suited for industrial type development. Favorable factors include adjacent or nearby access to freeway, rail, and airport.

It is difficult in light of past experience to predict what could be achieved in terms of Cloverdale industrial development. However, based upon regional activity and experience elsewhere in the State, we believe a reasonable target for Cloverdale to adopt would be approximately five acres of new development each year. This would result in development of approximately 75,000 square feet of building space annually, providing employment for approximately 100 workers. To achieve this level of development will require that Cloverdale adopt a significant and effective industrial development attraction campaign. This in turn will involve creation of appropriate industrial park facilities with ready-to-develop sites, realistic land pricing, and an organized marketing program. These are matters for subsequent consideration. We would also like to note that if Cloverdale can achieve success in industrial development, quite possibly the aforementioned target of five acres could be exceeded. Nevertheless, we recommend the five-acre figure as a goal at this time.

At this stage in our analysis, we have not evaluated an appropriate amount of land to be specified for industrial development in the general plan update. However, in general we recommend that its location be in the south and eastern portions of the City, near existing industrial facilities, also taking advantage of freeway, rail, and airport access.

## 9. RESIDENTIAL DEMAND MEASURES

As indicated in Appendix Table C2, the State Department of Finance estimates that the City's current (1990) housing inventory is 2,109 units, divided as follows:

	<u># Units</u>	<u>% of Total</u>
SF	1,488	70.6%
MF	429	20.3
MH	<u>192</u>	<u>9.1</u>
	2,109	100.0

This department also estimates that housing growth during the past five years has averaged 60 units annually, almost two-thirds of which has been of a single-family nature, as follows:



	<u>Single-</u> <u>Family</u>	<u>Multi-</u> <u>Family</u>	<u>Mobile</u> <u>Home</u>	<u>Total</u>	% <u>Single</u> <u>Family</u>
1985	22	16	6	44	50.0
1986	8	—	—	8	100.0
1987	37	—	—	37	100.0
1988	57	6	3	66	86.4
1989	61	81	—	142	43.0
1985-89 (Average)	37	21	2	60	61.7

As discussed earlier in Section II, we project that housing growth in the 2.5-mile ring should average about 100 units annually during the next 20 years. Further, it would be reasonable to expect 25% to 35% of this housing growth to be of a multi-family type.

We inspected two major residential projects currently in process in the City. Additional projects are in planning. We foresee our projection of residential growth to be conservative. Further, the City does not require additional residential development for its financial health. Rather, we view the goal of additional residential development should be to improve the balance of the community and residential quality levels within the community. Thus, we recommend that paramount consideration be given in the general plan update process to control and quality of new residential construction.

As with industrial development, we have not made specific recommendations at this point concerning the amount or location of residential uses to be specified in the general plan update. However, in general we recommend that single-family be considered for vacant properties west of Cloverdale Boulevard, leading into the hills to the west. Multiple family development would appear logical in a number of locations near Cloverdale Boulevard, including the City's downtown.

DHL:re:s103

## APPENDIX TABLES

- B1 Population Growth, Housing Growth & Resident Income  
Income Projections
- B2a Cloverdale Market Area Retail Purchasing Power—Summary  
Projections by Outlet Type Local Residents & Businesses
- B2b Cloverdale Market Area Retail Purchasing Power—Summary  
Projections by Location Type Local Residents & Businesses
- B2c Cloverdale Market Area Retail Purchasing Power—Detailed  
Projections Local Residents & Businesses
- B3 Market Area Local Office Demand
- C1a Population and Household Growth
- C1b Resident Incomes—1990
- C2 Population & Housing Growth 4-County Region
- C3a Residential Building Permit Activity Sonoma County  
& 4-County Region
- C3b Commercial Building Permit Activity Sonoma County  
& 4-County Region
- C3c Industrial Building Permit Activity Sonoma County  
& 4-County Region
- C4 Wage and Salary Employment—March 31 Each Year 4-County  
Area



Table B1  
POPULATION GROWTH, HOUSING GROWTH & RESIDENT INCOME PROJECTIONS  
CLOVERDALE MARKET AREAS & 4-COUNTY REGION

1274ME1  
09/18/90  
SL356

	Est	Projection				Average Annual Increase			
	1990	1995	2000	2005	2010	90-95	95-00	00-05	05-10
11 Rings From Hwy 101 & First St									
14 2.5-MILE RING									
17 Occupied Housing Units	2,210	2,710	3,210	3,710	4,210	100	100	100	100
19 Population Per Housing Unit	2.534	2.546	2.555	2.561	2.565	2.600	2.600	2.600	2.600
21 Population	5,600	6,900	8,200	9,500	10,800	260	260	260	260
23 Per Capita Income	12,842	14,191	15,112	15,781	16,288	20,000	20,000	20,000	20,000
25 Total Resident Income (\$000's)	71,915	97,915	123,915	149,915	175,915	5,200	5,200	5,200	5,200
28 5.0-MILE RING									
31 Occupied Housing Units	2,370	2,995	3,620	4,245	4,870	125	125	125	125
33 Population Per Housing Unit	2.532	2.546	2.555	2.562	2.567	2.600	2.600	2.600	2.600
35 Population	6,000	7,625	9,250	10,875	12,500	325	325	325	325
37 Per Capita Income	12,842	14,367	15,357	16,051	16,564	20,000	20,000	20,000	20,000
39 Total Resident Income (\$000's)	77,052	103,552	142,052	174,552	207,052	6,500	6,500	6,500	6,500
42 10.0-MILE RING									
45 Occupied Housing Units	3,490	4,240	4,990	5,740	6,490	150	150	150	150
47 Population Per Housing Unit	2.579	2.583	2.585	2.587	2.589	2.600	2.600	2.600	2.600
49 Population	9,000	10,950	12,900	14,850	16,800	390	390	390	390
51 Per Capita Income	13,026	14,268	15,134	15,773	16,264	20,000	20,000	20,000	20,000
53 Total Resident Income (\$000's)	117,234	156,234	195,234	234,234	273,234	7,000	7,000	7,000	7,000

In 1990 constant dollars.

Table B1 (Continued.....page 2)  
POPULATION GROWTH, HOUSING GROWTH & RESIDENT INCOME PROJECTIONS  
CLOVERDALE MARKET AREAS & 4-COUNTY REGION

127474E1  
09/18/20  
SL356

	---Est---	-----Projection-----				----- Average Annual Increase -----			
	1990	1995	2000	2005	2010	90-95	95-00	00-05	05-10
74 4-COUNTY REGION									
77 Occupied Housing Units	271,000	304,000	337,000	370,000	403,000	6,600	6,600	6,600	6,600
79 Population Per Housing Unit	2.325	2.353	2.379	2.398	2.415	2.600	2.600	2.600	2.600
81 Population	630,000	715,000	801,600	887,400	973,200	17,160	17,160	17,160	17,160
83 Per Capita Income	13,802	14,545	15,129	15,600	15,988	20,000	20,000	20,000	20,000
85 Total Resident Income (1000's)	8,695,260	10,411,260	12,127,260	13,843,260	15,559,260	343,200	343,200	343,200	343,200
88 & 10 4-COUNTY REGION									
91 Occupied Housing Units									
92 2.5-Mile Ring	0.82	0.83	0.95	1.00	1.04	1.52	1.52	1.52	1.52
93 5.0-Mile Ring	0.87	0.99	1.07	1.15	1.21	1.83	1.83	1.83	1.83
94 10.0-Mile Ring	1.29	1.39	1.48	1.55	1.61	2.27	2.27	2.27	2.27
96 Population									
97 2.5-Mile Ring	0.89	0.96	1.02	1.07	1.11	1.52	1.52	1.52	1.52
98 5.0-Mile Ring	0.95	1.07	1.15	1.23	1.28	1.83	1.83	1.83	1.83
99 10.0-Mile Ring	1.43	1.53	1.61	1.67	1.73	2.27	2.27	2.27	2.27
101 Total Resident Income									
102 2.5-Mile Ring	0.83	0.94	1.02	1.08	1.13	1.52	1.52	1.52	1.52
103 5.0-Mile Ring	0.89	1.05	1.17	1.26	1.33	1.83	1.83	1.83	1.83
104 10.0-Mile Ring	1.35	1.50	1.61	1.69	1.76	2.27	2.27	2.27	2.27
106 Per Capita Income									
107 2.5-Mile Ring	93.04	97.56	99.89	101.16	101.80	100.00	100.00	100.00	100.00
108 5.0-Mile Ring	93.04	98.78	101.51	102.89	103.61	100.00	100.00	100.00	100.00
109 10.0-Mile Ring	94.38	98.10	100.04	101.11	101.73	100.00	100.00	100.00	100.00

113 In 1990 constant dollars.

115 b  
116 Sonoma, Mendocino, Lake & Napa Counties.



Table B2a  
CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--SUMMARY PROJECTIONS BY OUTLET TYPE  
LOCAL RESIDENTS & BUSINESSES

127AR001  
03/10/90  
SL 356

	----- Total Increase -----					----- Average Annual Increase -----					
	1990	1995	2000	2005	2010	90-95	90-00	90-10	90-95	95-00	00-10
7 From Highway 101 & First St											
9											
10 PURCHASES (1990 Constant \$1000's)											
11											
12 2.5-Mile Ring											
13 Apparel	1,753	2,386	3,020	3,654	4,287	634	1,267	2,534	127	127	127
14 General Merchandise	4,331	5,897	7,463	9,029	10,595	1,566	3,132	6,263	313	313	313
15 Drug	827	1,126	1,426	1,725	2,024	299	598	1,196	60	60	60
16 Food	6,973	9,495	12,016	14,537	17,058	2,521	5,043	10,084	504	504	504
17 Liquor	387	526	666	806	945	140	280	559	28	28	28
18 Eating & Drinking	3,961	5,333	6,825	8,257	9,688	1,432	2,864	5,727	286	286	286
19 Home Furnish & Appl	1,641	2,235	2,828	3,422	4,015	594	1,187	2,374	119	119	119
20 Building & Farm	2,711	3,691	4,671	5,652	6,631	980	1,960	3,920	196	196	196
21 Automotive	6,338	8,630	10,921	13,213	15,503	2,292	4,583	9,165	458	458	458
22 Service Station	2,415	3,288	4,160	5,033	5,906	873	1,746	3,492	175	175	175
23 Other Retail	3,812	5,191	6,569	7,948	9,325	1,378	2,757	5,513	276	276	276
24 Total	35,149	47,858	60,566	73,275	85,978	12,709	25,417	50,829	2,542	2,542	2,541
25											
26 5.0-Mile Ring											
27 Apparel	1,878	2,670	3,462	4,254	5,046	792	1,584	3,168	158	158	158
28 General Merchandise	4,641	6,598	8,555	10,513	12,470	1,957	3,915	7,829	391	392	391
29 Drug	886	1,260	1,634	2,008	2,382	374	748	1,496	75	75	75
30 Food	7,472	10,623	13,775	16,926	20,077	3,151	6,303	12,606	630	630	630
31 Liquor	414	589	764	938	1,113	175	349	699	35	35	35
32 Eating & Drinking	4,244	6,033	7,823	9,613	11,403	1,790	3,580	7,159	358	358	358
33 Home Furnish & Appl	1,759	2,500	3,242	3,984	4,726	742	1,484	2,967	148	148	148
34 Building & Farm	2,905	4,130	5,355	6,580	7,805	1,225	2,450	4,901	245	245	245
35 Automotive	6,791	9,655	12,519	15,384	18,248	2,864	5,729	11,457	573	573	573
36 Service Station	2,587	3,678	4,769	5,861	6,952	1,091	2,182	4,365	218	218	218
37 Other Retail	4,885	5,807	7,530	9,253	10,976	1,723	3,446	6,891	345	345	345
38 Total	37,660	53,543	69,429	85,315	101,198	15,883	31,770	63,538	3,177	3,177	3,177
39											
40 10.0-Mile Ring											
41 Apparel	2,857	3,880	4,758	5,708	6,659	950	1,901	3,802	190	190	190
42 General Merchandise	7,061	9,410	11,758	14,107	16,456	2,349	4,697	9,396	470	470	470
43 Drug	1,349	1,797	2,246	2,695	3,143	447	897	1,795	90	90	90
44 Food	11,368	15,150	18,931	22,713	26,495	3,782	7,563	15,127	756	756	756
45 Liquor	630	840	1,049	1,259	1,469	210	419	838	42	42	42
46 Eating & Drinking	6,457	8,604	10,752	12,900	15,048	2,140	4,295	8,592	430	430	430
47 Home Furnish & Appl	2,676	3,566	4,456	5,346	6,236	890	1,780	3,561	178	178	178
48 Building & Farm	4,419	5,890	7,360	8,830	10,300	1,470	2,940	5,881	294	294	294
49 Automotive	10,332	13,769	17,206	20,643	24,081	3,437	6,874	13,749	687	687	687
50 Service Station	3,936	5,245	6,555	7,864	9,174	1,302	2,619	5,238	262	262	262
51 Other Retail	6,215	8,282	10,349	12,417	14,485	2,068	4,135	8,270	414	413	414
52 Total	57,239	76,361	95,420	114,482	133,546	19,062	38,121	76,247	3,812	3,812	3,813

Table B2a (Continued.....page 2)  
CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--SUMMARY PROJECTIONS BY OUTLET TYPE  
LOCAL RESIDENTS & BUSINESSES

12740001  
07/19/90  
SL 35

						----- Total Increase -----			----- Average Annual Increase -----		
	1990	1995	2000	2005	2010	90-95	95-00	00-10	90-95	95-00	00-10
67 From Highway 101 & First St											
70 SUPPORTABLE BUILDING SPACE (000's SF)											
72 2.5-Mile Ring											
73 Apparel	8.8	11.9	15.1	18.3	21.4	3.2	6.3	12.7	0.6	0.6	0.6
74 General Merchandise	21.7	29.5	37.3	45.1	53.0	7.8	15.7	31.3	1.6	1.6	1.6
75 Drug	4.1	5.6	7.1	8.6	10.1	1.5	3.0	6.0	0.3	0.3	0.3
76 Food	11.6	15.8	20.0	24.2	28.4	4.2	8.4	16.8	0.8	0.8	0.8
77 Liquor	1.9	2.6	3.3	4.0	4.7	0.7	1.4	2.8	0.1	0.1	0.1
78 Eating & Drinking	13.2	18.0	22.7	27.5	32.3	4.8	9.5	19.1	1.0	1.0	1.0
79 Home Furnish & Appl	8.2	11.2	14.1	17.1	20.1	3.0	5.9	11.9	0.6	0.6	0.6
80 Building & Farm	13.6	18.5	23.4	28.3	33.2	4.9	9.8	19.6	1.0	1.0	1.0
81 Automotive	8.5	11.5	14.6	17.6	20.7	3.1	6.1	12.2	0.6	0.6	0.6
82 Service Station	1.2	1.6	2.1	2.5	3.0	0.4	0.9	1.7	0.1	0.1	0.1
83 Other Retail	19.1	26.0	32.8	39.7	46.6	6.9	13.8	27.6	1.4	1.4	1.4
84 Total	111.8	152.2	192.6	233.1	273.5	40.4	80.8	161.7	8.1	8.1	8.1
86 5.0-Mile Ring											
87 Apparel	9.4	13.3	17.3	21.3	25.2	4.0	7.9	15.8	0.8	0.8	0.8
88 General Merchandise	23.2	33.0	42.8	52.6	62.4	9.8	19.6	39.1	2.0	2.0	2.0
89 Drug	4.4	6.3	8.2	10.0	11.9	1.9	3.7	7.5	0.4	0.4	0.4
90 Food	12.5	17.7	23.0	28.2	33.5	5.3	10.5	21.0	1.1	1.1	1.1
91 Liquor	2.1	2.9	3.8	4.7	5.6	0.9	1.7	3.5	0.2	0.2	0.2
92 Eating & Drinking	14.1	20.1	26.1	32.0	38.0	6.0	11.9	23.9	1.2	1.2	1.2
93 Home Furnish & Appl	8.8	12.5	16.2	19.9	23.6	3.7	7.4	14.8	0.7	0.7	0.7
94 Building & Farm	14.5	20.6	26.8	32.9	39.0	6.1	12.3	24.5	1.2	1.2	1.2
95 Automotive	9.1	12.9	16.7	20.5	24.3	3.8	7.6	15.3	0.8	0.8	0.8
96 Service Station	1.3	1.8	2.4	2.9	3.5	0.5	1.1	2.2	0.1	0.1	0.1
97 Other Retail	20.4	29.0	37.7	46.3	54.9	8.6	17.2	34.5	1.7	1.7	1.7
98 Total	119.8	170.3	220.8	271.4	321.9	50.5	101.0	202.1	10.1	10.1	10.1
100 10.0-Mile Ring											
101 Apparel	14.3	19.0	23.8	28.5	33.3	4.8	9.5	19.0	1.0	1.0	1.0
102 General Merchandise	35.3	47.0	58.8	70.5	82.3	11.7	23.5	47.0	2.3	2.3	2.3
103 Drug	6.7	9.0	11.2	13.5	15.7	2.2	4.5	9.0	0.4	0.4	0.4
104 Food	18.9	25.2	31.6	37.9	44.2	6.3	12.6	25.2	1.3	1.3	1.3
105 Liquor	3.2	4.2	5.2	6.3	7.3	1.0	2.1	4.2	0.2	0.2	0.2
106 Eating & Drinking	21.5	28.7	35.8	43.0	50.2	7.2	14.3	28.6	1.4	1.4	1.4
107 Home Furnish & Appl	13.4	17.8	22.3	26.7	31.2	4.5	8.9	17.8	0.9	0.9	0.9
108 Building & Farm	22.1	29.4	36.8	44.1	51.5	7.4	14.7	29.4	1.5	1.5	1.5
109 Automotive	13.8	18.4	22.9	27.5	32.1	4.6	9.2	18.3	0.9	0.9	0.9
110 Service Station	2.0	2.6	3.3	3.9	4.6	0.7	1.3	2.6	0.1	0.1	0.1
111 Other Retail	31.1	41.4	51.7	62.1	72.4	10.3	20.7	41.3	2.1	2.1	2.1
112 Total	182.2	242.9	303.5	364.1	424.8	60.6	121.2	242.5	12.1	12.1	12.1

Table B2b  
CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--SUMMARY PROJECTIONS BY LOCATION TYPE  
LOCAL RESIDENTS & BUSINESSES

12743001

07/18/90

S. 36

	----- Total Increase -----					----- Average Annual Increase -----					
7 From Highway 121 & First St	1990	1995	2000	2005	2010	90-95	90-00	90-10	90-95	95-00	00-10
10 PURCHASES (1990 Constant 1000's)											
12 2.5-Mile Ring											
14 Regional Shopping Center	6,136	8,354	10,572	12,791	15,000	2,218	4,437	8,872	444	444	444
15 Specialty Shopping Center	900	1,226	1,551	1,877	2,202	325	651	1,302	65	65	65
16 Sub-Total	7,036	9,580	12,123	14,667	17,210	2,544	5,088	10,174	509	509	509
17 Arterial Retail	19,319	26,304	33,289	40,274	47,256	6,995	13,970	27,937	1,397	1,397	1,397
18 Neighb/Comm Shop Center	8,795	11,975	15,154	18,334	21,513	3,180	6,360	12,718	636	636	636
19 Total	35,149	47,858	60,566	73,275	85,978	12,709	25,417	50,829	2,542	2,542	2,541
21 5.0-Mile Ring											
23 Regional Shopping Center	6,574	9,346	12,119	14,892	17,665	2,772	5,546	11,091	554	555	555
24 Specialty Shopping Center	964	1,371	1,778	2,185	2,592	407	814	1,627	81	81	81
25 Sub-Total	7,538	10,717	13,897	17,077	20,256	3,179	6,359	12,718	636	636	636
26 Arterial Retail	28,699	29,428	30,160	46,891	55,621	8,730	17,461	34,922	1,746	1,746	1,746
27 Neighb/Comm Shop Center	9,423	13,337	17,372	21,347	25,321	3,974	7,949	15,899	795	795	795
28 Total	37,660	53,543	63,429	85,315	101,198	15,883	31,770	63,538	3,177	3,177	3,177
30 10.0-Mile Ring											
32 Regional Shopping Center	10,002	13,329	16,656	19,984	23,311	3,327	6,654	13,309	665	665	666
33 Specialty Shopping Center	1,467	1,956	2,444	2,932	3,420	488	976	1,953	98	98	98
34 Sub-Total	11,469	15,285	19,100	22,915	26,731	3,815	7,630	15,262	763	763	763
35 Arterial Retail	31,493	41,970	52,445	62,922	73,400	10,477	20,952	41,907	2,095	2,095	2,096
36 Neighb/Comm Shop Center	14,337	19,106	23,875	28,644	33,415	4,769	9,538	19,078	954	954	954
37 Total	57,299	76,361	95,420	114,482	133,546	19,062	38,121	76,247	3,812	3,812	3,813

Table B2b (Continued.....page 2)  
 CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--SUMMARY PROJECTIONS BY LOCATION TYPE  
 LOCAL RESIDENTS & BUSINESSES

12710001  
 03/18/90  
 SL 356

						----- Total Increase -----			----- Average Annual Increase -----		
						90-95	95-00	00-10	90-95	95-00	00-10
65											
66											
67	From Highway 101 & First St	1990	1995	2000	2005	2010					
68											
69											
70	SUPPORTABLE BUILDING SPACE (200's SF)										
71											
72	2.5-Mile Ring										
73											
74	Regional Shopping Center	28.9	39.4	49.8	60.3	70.8	10.5	20.9	41.0	2.1	2.1
75	Specialty Shopping Center	3.1	4.3	5.4	6.6	7.7	1.1	2.3	4.5	0.2	0.2
76	Sub-Total	32.1	43.7	55.3	66.8	78.4	11.6	23.2	45.4	2.3	2.3
77	Arterial Retail	56.6	77.0	97.5	117.9	138.3	20.5	40.9	81.0	4.1	4.1
78	Neighb/Commun Shop Center	23.2	31.5	39.9	48.3	56.7	8.4	16.8	33.5	1.7	1.7
79	Total	111.8	152.2	192.6	233.1	273.5	40.4	80.8	161.7	8.1	8.1
80											
81	5.0-Mile Ring										
82											
83	Regional Shopping Center	31.0	44.1	57.1	70.2	83.3	13.1	26.1	52.3	2.6	2.6
84	Specialty Shopping Center	3.4	4.8	6.2	7.6	9.0	1.4	2.8	5.7	0.3	0.3
85	Sub-Total	34.4	48.8	63.3	77.8	92.3	14.5	29.0	58.0	2.9	2.9
86	Arterial Retail	60.6	86.2	111.7	137.3	162.8	25.6	51.1	102.2	5.1	5.1
87	Neighb/Commun Shop Center	24.8	35.3	45.8	56.2	66.7	10.5	20.9	41.9	2.1	2.1
88	Total	119.8	170.3	220.8	271.4	321.9	50.5	101.0	202.1	10.1	10.1
89											
90	10.0-Mile Ring										
91											
92	Regional Shopping Center	47.2	62.8	78.5	94.2	109.9	15.7	31.4	62.7	3.1	3.1
93	Specialty Shopping Center	5.1	6.8	8.5	10.2	11.9	1.7	3.4	6.8	0.3	0.3
94	Sub-Total	52.3	69.7	87.1	104.4	121.8	17.4	34.8	69.6	3.5	3.5
95	Arterial Retail	92.2	122.9	153.5	184.2	214.9	30.7	61.3	122.7	6.1	6.1
96	Neighb/Commun Shop Center	37.8	50.3	62.9	75.5	88.0	12.6	25.1	50.3	2.5	2.5
97	Total	182.2	242.9	303.5	364.1	424.8	60.6	121.2	242.5	12.1	12.1



Table B2c  
CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--DETAILED PROJECTIONS  
LOCAL RESIDENTS & BUSINESSES

12748001  
03/18/90  
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7 FACTORS.....

	---From Highway 101 & First St---					----- X Dist by Location Type -----				
	2.5-Mile Ring	5.0-Mile Ring	10.0-Mile Ring	4-County Region	6-County Region	Regional Shopping Center	Arterial Retail	Specialty Shopping Center	M/Comm Shopping Center	Total
13 Purchasing Power Index										
14										
15 Per Capita Income 1990 (\$)										
16 1990	12,842	12,842	13,026	11,636	14,940					
17 1995	14,191	14,367	14,268	12,841	14,940					
18 2000	15,112	15,357	15,134	12,271	14,940					
19 2005	15,781	16,051	15,773	12,571	14,940					
20 2010	16,288	16,564	16,264	12,976	14,940					
21										
22 Index (% of Region)										
23 1990	86.0	86.0	87.2	77.9	100.0					
24 1995	95.0	96.2	95.5	80.6	100.0					
25 2000	101.2	102.0	101.3	82.1	100.0					
26 2005	105.6	107.4	105.6	84.1	100.0					
27 2010	109.0	110.9	108.9	86.9	100.0					
28										
29 Retail Purchases Per Capita--1990										
30 (1990 Constant \$)										
31 Apparel	313	313	317	284	364	69.3	20.6	3.9	6.2	100.0
32 General Merchandise	773	773	785	701	900	75.7	21.8	0.0	2.5	100.0
33 Drug	148	148	150	134	172	5.0	10.0	0.0	85.0	100.0
34 Food	1,245	1,245	1,263	1,128	1,449	5.0	10.0	3.0	82.0	100.0
35 Liquor	69	69	70	63	80	3.0	47.0	3.0	47.0	100.0
36 Eating & Drinking	707	707	717	641	823	7.2	67.8	10.0	15.0	100.0
37 Home Furnish & Appl	293	293	297	266	341	7.7	82.5	4.0	5.0	100.0
38 Building & Farm	484	484	491	439	563	0.3	93.7	0.1	5.9	100.0
39 Automotive	1,132	1,132	1,148	1,026	1,317	0.5	98.6	0.0	0.9	100.0
40 Service Station	431	431	437	331	502	0.0	95.0	0.0	5.0	100.0
41 Other Retail	681	681	691	617	792	20.7	50.6	3.5	25.2	100.0
42 Total	6,277	6,277	6,367	5,687	7,302	17.5	55.0	2.6	25.0	100.0
43										
44 Area Sales Performance										
45 Index (% of Region)	100.0	100.0	100.0	100.0	100.0					
46										
47 Sales Per SF (\$)										
48 Apparel	200	200	200	200	200					
49 General Merchandise	200	200	200	200	200					
50 Drug	200	200	200	200	200					
51 Food	600	600	600	600	600					
52 Liquor	200	200	200	200	200					
53 Eating & Drinking	300	300	300	300	300					
54 Home Furnish & Appl	200	200	200	200	200					
55 Building & Farm	200	200	200	200	200					
56 Automotive	750	750	750	750	750					
57 Service Station	2,000	2,000	2,000	2,000	2,000					
58 Other Retail	200	200	200	200	200					

Used as index area.



Table B2c (continued.....page 2)  
 CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--DETAILED PROJECTIONS  
 LOCAL RESIDENTS & BUSINESSES

1274RPP1  
 03/18/90  
 SL356

	---- Average Annual Increase ----							
	1990	1995	2000	2005	2010	90-95	95-00	00-10
From Highway 101 & First St								
2.5-MILE RING								
Population	5,600	6,900	8,200	9,500	10,800	260	260	260
Purchases (1990 Constant \$000's)								
Apparel	1,753	2,386	3,020	3,654	4,287	127	127	127
General Merchandise	4,331	5,897	7,463	9,029	10,595	313	313	313
Drug	827	1,126	1,426	1,725	2,024	60	60	60
Food	6,973	9,495	12,016	14,537	17,058	504	504	504
Liquor	387	526	666	806	945	28	28	28
Eating & Drinking	3,961	5,393	6,825	8,257	9,688	286	286	286
Home Furnish & Appl	1,641	2,235	2,828	3,422	4,015	119	119	119
Building & Farm	2,711	3,691	4,671	5,652	6,631	196	196	196
Automotive	6,338	8,630	10,921	13,213	15,503	458	458	458
Service Station	2,415	3,288	4,160	5,033	5,906	175	175	175
Other Retail	3,812	5,191	6,569	7,948	9,325	276	276	276
Total	35,149	47,858	60,566	73,275	85,978	2,542	2,542	2,541
Supportable Building Space (000's SF)								
Apparel	8.8	11.9	15.1	18.3	21.4	0.6	0.6	0.6
General Merchandise	21.7	29.5	37.3	45.1	53.0	1.6	1.6	1.6
Drug	4.1	5.6	7.1	8.6	10.1	0.3	0.3	0.3
Food	11.6	15.8	20.0	24.2	28.4	0.8	0.8	0.8
Liquor	1.9	2.6	3.3	4.0	4.7	0.1	0.1	0.1
Eating & Drinking	13.2	18.0	22.7	27.5	32.3	1.0	1.0	1.0
Home Furnish & Appl	8.2	11.2	14.1	17.1	20.1	0.6	0.6	0.6
Building & Farm	13.6	18.5	23.4	28.3	33.2	1.0	1.0	1.0
Automotive	8.5	11.5	14.6	17.6	20.7	0.6	0.6	0.6
Service Station	1.2	1.6	2.1	2.5	3.0	0.1	0.1	0.1
Other Retail	19.1	26.0	32.8	39.7	46.6	1.4	1.4	1.4
Total	111.8	152.2	192.6	233.1	273.5	8.1	8.1	8.1

--- Average Annual Increase ---

	1990	1995	2000	2005	2010	90-95	95-00	00-10
From Highway 101 & First St								
5.0-MILE RING								
Population	6,000	7,625	9,250	10,875	12,500	325	325	325
Purchases (1990 Constant \$200's)								
Apparel	1,070	2,670	3,462	4,254	5,046	158	158	158
General Merchandise	4,641	6,598	8,555	10,513	12,470	391	392	391
Drug	886	1,260	1,634	2,000	2,382	75	75	75
Food	7,472	10,623	13,775	16,926	20,077	630	630	630
Liquor	414	589	764	938	1,113	35	35	35
Eating & Drinking	4,244	6,033	7,823	9,613	11,403	358	358	358
Home Furnish & Appl	1,759	2,500	3,242	3,984	4,726	148	148	148
Building & Farm	2,905	4,130	5,355	6,580	7,805	245	245	245
Automotive	6,791	9,655	12,519	15,384	18,248	573	573	573
Service Station	2,587	3,678	4,769	5,861	6,952	218	218	218
Other Retail	4,085	5,887	7,538	9,253	10,976	345	345	345
Total	37,660	53,543	69,429	85,315	101,190	3,177	3,177	3,177
Supportable Building Space (000's SF)								
Apparel	9.4	13.3	17.3	21.3	25.2	0.8	0.8	0.8
General Merchandise	23.2	33.0	42.8	52.6	62.4	2.0	2.0	2.0
Drug	4.4	6.3	8.2	10.0	11.9	0.4	0.4	0.4
Food	12.5	17.7	23.0	28.2	33.5	1.1	1.1	1.1
Liquor	2.1	2.9	3.8	4.7	5.6	0.2	0.2	0.2
Eating & Drinking	14.1	20.1	26.1	32.0	38.0	1.2	1.2	1.2
Home Furnish & Appl	8.8	12.5	16.2	19.9	23.6	0.7	0.7	0.7
Building & Farm	14.5	20.6	26.8	32.9	39.0	1.2	1.2	1.2
Automotive	9.1	12.9	16.7	20.5	24.3	0.8	0.8	0.8
Service Station	1.3	1.8	2.4	2.9	3.5	0.1	0.1	0.1
Other Retail	20.4	29.8	37.7	46.3	54.9	1.7	1.7	1.7
Total	113.8	170.3	220.8	271.4	321.9	10.1	10.1	10.1

Table B2c (Continued.....page 4)  
CLOVERDALE MARKET AREA RETAIL PURCHASING POWER--DETAILED PROJECTIONS  
LOCAL RESIDENTS & BUSINESSES

1274RPP1  
09/10/90  
SL356

						--- Average Annual Increase ---		
190 From Highway 101 & First St	1990	1995	2000	2005	2010	90-95	95-00	00-10
193 10.0-MILE RING								
195 Population	9,000	10,950	12,900	14,850	16,800	390	390	390
197 Purchases (1990 Constant \$000's)								
200 Apparel	2,857	3,808	4,758	5,708	6,659	190	190	190
201 General Merchandise	7,061	9,410	11,758	14,107	16,456	470	470	470
202 Drug	1,349	1,797	2,246	2,695	3,143	90	90	90
203 Food	11,368	15,150	18,931	22,713	26,495	756	756	756
204 Liquor	630	840	1,049	1,259	1,469	42	42	42
205 Eating & Drinking	6,457	8,604	10,752	12,900	15,048	430	430	430
206 Home Furnish & Appl	2,676	3,566	4,456	5,346	6,236	170	170	170
207 Building & Farm	4,419	5,890	7,360	8,830	10,300	294	294	294
208 Automotive	10,332	13,769	17,206	20,643	24,081	607	607	607
209 Service Station	3,936	5,245	6,555	7,864	9,174	262	262	262
210 Other Retail	6,215	8,282	10,349	12,417	14,485	414	413	414
212 Total	57,299	76,361	95,420	114,482	133,546	3,812	3,812	3,813
214 Supportable Building 215 Space (000's SF)								
217 Apparel	14.3	19.0	23.8	28.5	33.3	1.0	1.0	1.0
218 General Merchandise	35.3	47.0	58.8	70.5	82.3	2.3	2.3	2.3
219 Drug	6.7	9.0	11.2	13.5	15.7	0.4	0.4	0.4
220 Food	18.9	25.2	31.6	37.9	44.2	1.3	1.3	1.3
221 Liquor	3.2	4.2	5.2	6.3	7.3	0.2	0.2	0.2
222 Eating & Drinking	21.5	28.7	35.8	43.0	50.2	1.4	1.4	1.4
223 Home Furnish & Appl	13.4	17.8	22.3	26.7	31.2	0.9	0.9	0.9
224 Building & Farm	22.1	29.4	36.8	44.1	51.5	1.5	1.5	1.5
225 Automotive	13.8	18.4	22.9	27.5	32.1	0.9	0.9	0.9
226 Service Station	2.0	2.6	3.3	3.9	4.6	0.1	0.1	0.1
227 Other Retail	31.1	41.4	51.7	62.1	72.4	2.1	2.1	2.1
229 Total	182.2	242.9	303.5	364.1	424.8	12.1	12.1	12.1

Table B3  
MARKET AREA LOCAL OFFICE DEMAND  
CLOVERDALE MARKET AREAS

1274L001  
03/18/98  
SL356

---From Highway 101 & First St---									
	2.5-Mile Ring	5.0-Mile Ring	10.0-Mile Ring	4-County Region	6-County Region				
FACTORS.....									
Demand Index									
Per Cap Income (1990 \$)	12,842	12,842	13,026	11,636	14,910				
Index (% of Region)	86.0	86.0	87.2	77.9	100.0	a Used as an index.			
Demand Per Capita (SF)									
General	2.50	2.50	2.62	2.34	3.00				
Financial	1.72	1.72	1.74	1.56	2.00				
Medical	2.15	2.15	2.18	1.95	2.50				
Total	6.45	6.45	6.54	5.84	7.50				
	-----Average Annual Increase-----								
	1990	1995	2000	2005	2010	90-95	95-00	00-05	05-10
PROJECTIONS.....									
2.5-MILE RING									
Population	5,600	6,900	8,200	9,500	10,800	260	260	260	260
Building Space (SF 000's)									
General	14.4	17.0	21.1	24.5	27.85	0.67	0.67	0.67	0.67
Financial	9.6	11.9	14.1	16.3	18.57	0.45	0.45	0.45	0.45
Medical	12.0	14.0	17.6	20.4	23.21	0.56	0.56	0.56	0.56
Total	36.1	44.5	52.9	61.2	69.63	1.68	1.68	1.68	1.68
5.0-MILE RING									
Population	6,000	7,625	9,250	10,875	12,500	325	325	325	325
Building Space (SF 000's)									
General	15.5	19.7	23.9	28.0	32.2	0.84	0.84	0.84	0.84
Financial	10.3	13.1	15.9	18.7	21.5	0.56	0.56	0.56	0.56
Medical	12.9	16.4	19.9	23.4	26.9	0.70	0.70	0.70	0.70
Total	38.7	49.2	59.6	70.1	80.6	2.10	2.10	2.10	2.10
10.0-MILE RING									
Population	9,000	10,750	12,500	14,250	16,000	390	390	390	390
Building Space (SF 000's)									
General	23.5	28.6	33.7	38.8	43.9	1.02	1.02	1.02	1.02
Financial	15.7	19.1	22.5	25.9	29.3	0.68	0.68	0.68	0.68
Medical	19.6	23.9	28.1	32.4	36.6	0.85	0.85	0.85	0.85
Total	58.9	71.6	84.4	97.1	109.9	2.55	2.55	2.55	2.55

Table C1a  
POPULATION AND HOUSEHOLD GROWTH  
CLOVERDALE MARKET AREAS AND REGIONAL COMPARISONS

12750051  
09/17/90  
SL356

	From Hwy 101 & First St					a	b
	2.5-Mile Ring	5.0-Mile Ring	10.0-Mile Ring	City of Cloverdale	Sonoma County	4-County North Co Region	9-County Bay Area Region
11 POPULATION							
12							
13 1980	5,107	5,231	7,324	3,989	293,681	501,984	5,179,784
14 1990	5,592	5,639	8,007	4,300	352,360	594,550	5,020,979
15 1995 Projection	5,681	5,730	8,186	4,369	378,373	639,507	6,121,244
16							
17 % Increase 1980-1990	7.81	7.80	9.35	7.80	17.50	18.44	12.53
18 % Increase 1990-1995	1.59	1.61	2.21	1.60	7.38	7.56	5.01
19							
20 Avg Ann Incr 1980-1990	41	41	69	31	5,268	9,257	64,930
21 Avg Ann Incr 1990-1995	18	18	35	14	5,203	8,991	50,453
22							
23 % OF 2-COUNTY REGION POPULATION							
24							
25 1980	0.10	0.10	0.14	0.08	5.79	9.69	100.00
26 1990	0.10	0.10	0.14	0.07	6.04	10.20	100.00
27 1995 Projection	0.09	0.09	0.13	0.07	6.18	10.45	100.00
28							
29 Avg Ann Incr 1980-1990	0.06	0.06	0.11	0.05	8.11	14.26	100.00
30 Avg Ann Incr 1990-1995	0.03	0.03	0.06	0.02	8.90	15.38	100.00
31							
32 HOUSEHOLDS							
33							
34 1980	2,012	2,029	2,766	1,547	114,474	191,362	1,970,549
35 1990	2,213	2,231	3,105	1,702	139,106	233,351	2,221,506
36 1995 Projection	2,282	2,302	3,231	1,755	150,512	252,110	2,320,510
37							
38 % Increase 1980-1990	9.99	9.96	12.26	10.02	21.52	21.94	12.74
39 % Increase 1990-1995	3.12	3.10	4.06	3.11	8.20	8.04	4.45
40							
41 Avg Ann Incr 1980-1990	22	22	30	17	2,737	4,665	27,093
42 Avg Ann Incr 1990-1995	8	8	14	6	1,267	2,084	10,992
43							
44 POPULATION PER HOUSEHOLD							
45 1980	2.58	2.58	2.65	2.58	2.62	2.62	2.63
46 1990	2.53	2.53	2.58	2.53	2.53	2.55	2.62
47 1995 Projection	2.49	2.49	2.53	2.49	2.51	2.54	2.64
48 On Increase 1980-1990	1.01	1.02	1.02	1.01	1.32	1.30	2.33
49 On Increase 1990-1995	2.32	2.31	2.53	2.34	4.11	4.31	5.32
50							
51 POPULATION PER SQUARE MILE: 1990							
52 # Square Miles	19.64	70.54	314.16				
53 Population Per Sq Mi	285	72	25		7,000 to 8,000		
54							
55 a					(Prototypical Urban)		
56 Sonoma, Mendocino, Lake & Napa Counties							
57 b							



Table C1b  
RESIDENT INCOMES--1990  
CLOVERDALE MARKET AREAS AND REGIONAL COMPARISONS

1274UMG1  
03/17/90  
SLJ56

-----From Hwy 101 & First St-----							
	2.5-Mile Ring	5.0-Mile Ring	10.0-Mile Ring	City of Cloverdale	Sonoma County	4-County North Co Region	9-County Bay Area Region
75 # FAMILIES	1,562	1,575	2,217	1,201	94,134	153,695	3,877,011
78 FAMILY INCOME DISTRIBUTION (%)							
80 Under \$10,000	10.0	10.0	11.0	10.0	8.1	9.2	6.5
81 \$10,000 - \$19,999	10.0	10.0	16.9	10.0	15.1	17.4	10.6
82 \$20,000 - \$29,999	16.1	16.0	16.5	16.1	15.0	16.6	12.1
83 \$30,000 - \$39,999	13.2	13.2	14.0	13.2	15.2	15.4	12.6
84 \$40,000 - \$49,999	13.5	13.5	13.7	13.5	14.6	13.4	12.8
85 \$50,000 - \$74,999	19.1	19.2	18.2	19.1	20.7	18.0	25.2
86 \$75,000 & Over	8.5	8.5	9.7	8.5	10.5	9.2	20.2
87 Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
90 MEDIAN FAMILY INCOME (\$)	32,812	32,812	33,541	32,812	37,200	34,344	46,384
93 AVERAGE FAMILY INCOME (\$)	37,217	37,217	37,965	37,217	42,310	39,776	54,100
96 PER CAPITA INCOME (\$)	12,842	12,842	13,026	12,842	14,632	13,002	17,589
99 % TO 9-COUNTY REGION							
101 Median Family Income	70.7	70.7	72.3	70.7	80.4	74.0	100.0
102 Average Family Income	68.0	68.0	70.2	68.0	78.2	73.5	100.0
103 Per Capita Income	73.0	73.0	74.1	73.0	83.2	78.5	100.0
104 Under \$20,000 Income	173.1	173.1	163.2	173.1	135.7	155.6	100.0
105 \$50,000-Plus Income	60.0	61.0	61.5	60.0	60.7	61.7	100.0
106 \$75,000-Plus Income	42.1	42.1	48.0	42.1	52.0	45.5	100.0

a Sonoma, Mendocino, Lake & Napa Counties

b San Francisco, Marin, Sonoma, Napa, Solano, Contra Costa, Alameda, Santa Clara & San Mateo Counties.

Table C2  
POPULATION & HOUSING GROWTH  
4-COUNTY REGION

127450F1  
09/17/90  
SL356

Annual Increase.....

1980-85  
(Average) 1985-86 1986-87 1987-88 1988-89 1989-90 1985-90  
(Average) 1990-90  
(Average)

POPULATION

Sonoma County

Cloverdale	3,989	4,341	4,375	4,437	4,518	4,615	4,856	78	34	62	81	97	241	183	87
Cotati	3,346	4,079	4,310	4,495	4,823	5,184	5,736	147	261	155	328	361	552	331	239
Healdsburg	7,217	7,897	8,286	8,495	8,803	9,256	9,325	136	389	297	388	453	69	286	211
Petaluma	33,834	37,288	38,408	39,163	40,284	41,829	42,938	691	1,112	763	1,121	1,545	1,101	1,128	910
Rohnert Park	22,965	28,187	29,674	31,409	31,995	33,369	34,878	1,844	1,487	1,735	586	1,374	1,589	1,338	1,171
Santa Rosa	83,320	94,621	97,644	102,958	108,723	111,593	112,551	2,260	3,023	5,314	5,765	2,870	958	3,586	2,923
Sebastopol	5,595	6,188	6,227	6,328	6,420	6,511	6,719	183	119	181	92	91	208	122	112
Sonoma	6,854	6,854	7,881	7,254	7,586	7,945	8,334	160	227	173	332	359	389	296	228
Unincorporated	133,361	140,648	143,323	144,558	147,144	151,267	160,030	1,457	2,675	1,227	2,594	4,123	8,763	3,876	2,667
Total Sonoma County	299,681	338,023	339,358	349,887	360,296	371,569	385,359	6,858	9,327	9,739	11,207	11,273	13,798	11,867	8,568

Mendocino County

Fort Bragg	5,819	5,665	5,777	5,842	5,929	5,987	6,136	129	112	65	87	58	149	94	112
Point Arena	425	484	462	451	439	444	456	12	(22)	(11)	(12)	5	12	(6)	3
Ukiah	12,275	13,054	13,331	13,384	13,553	14,001	14,228	204	277	53	169	448	219	233	219
Willits	4,008	4,347	4,384	4,408	4,441	4,516	4,556	68	37	16	41	75	48	42	55
Unincorporated	45,251	49,119	50,313	50,576	51,240	51,955	53,737	774	1,194	253	664	715	1,782	924	849
Total Mendocino County	66,738	72,669	74,267	74,653	75,682	76,993	79,185	1,186	1,598	386	949	1,381	2,202	1,287	1,237

Lake County

Clearlake	0	10,289	10,538	10,667	10,732	10,781	11,220	2,842	329	129	65	49	439	282	1,122
Lakeport	3,675	4,043	4,183	4,244	4,412	4,479	4,681	74	60	141	168	67	122	112	93
Unincorporated	32,691	32,766	34,058	35,078	36,205	36,827	38,344	15	1,292	1,000	1,207	542	1,517	1,116	565
Total Lake County	36,366	47,018	48,639	49,989	51,429	52,087	54,165	2,130	1,681	1,270	1,440	658	2,078	1,429	1,780

Napa County

Calistoga	3,879	4,049	4,218	4,340	4,374	4,385	4,436	34	169	122	34	12	58	77	56
Napa	58,879	54,239	55,579	56,276	56,988	57,863	59,523	684	1,288	697	712	875	1,668	1,845	864
St Helena	4,898	5,017	5,163	5,034	5,078	5,038	5,030	24	146	(123)	36	28	(8)	15	19
Yountville	2,893	3,117	3,136	3,179	3,071	3,065	3,242	45	19	43	(188)	(6)	177	25	35
Unincorporated	36,658	35,684	36,500	35,328	36,385	37,165	38,366	(193)	856	(212)	(33)	868	1,281	536	172
Total Napa County	99,199	102,166	104,646	105,167	105,888	107,577	110,657	593	2,488	521	641	1,769	3,888	1,698	1,146

Total 4-County Region

	581,984	551,876	565,962	578,838	593,135	608,136	623,286	9,978	15,886	11,936	14,237	15,881	21,150	15,482	12,738
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Table C2 (Continued.....page 2)  
POPULATION & HOUSING GROWTH  
4-COUNTY REGION

12745051  
07/17/90  
SL 356

	1980	1985	1986	1987	1988	1989	1990	Annual Increase.....							
								1980-85 (Average)	1985-86	1986-87	1987-88	1988-89	1989-90	1985-90 (Average)	1988-90 (Average)
71 SINGLE-FAMILY HOUSING UNITS															
73 Sonoma County															
74 Cloverdale	1,200	1,303	1,325	1,333	1,370	1,427	1,488	21	22	8	37	57	61	37	29
75 Cotati	744	973	1,057	1,137	1,223	1,328	1,500	46	84	80	86	185	172	105	76
76 Healdsburg	2,251	2,592	2,703	2,774	2,873	2,918	2,939	68	111	71	99	45	21	69	69
77 Petaluma	10,807	11,168	11,403	11,789	12,183	12,609	13,067	232	235	306	394	426	458	380	306
78 Robert Park	5,539	6,844	7,136	7,339	7,350	7,599	7,976	261	292	203	11	249	377	226	244
79 Santa Rosa	24,567	28,174	29,137	30,419	31,568	32,398	33,078	721	963	1,282	1,149	830	600	981	851
80 Sebastopol	1,744	1,869	1,927	1,953	1,996	2,013	2,055	25	58	26	43	17	42	37	31
81 Sonoma	1,922	2,282	2,339	2,421	2,508	2,570	2,649	72	57	82	87	62	79	73	73
82 Unincorporated	43,401	45,255	45,917	46,779	47,604	48,028	52,059	371	662	862	825	1,224	3,231	1,361	866
83 Total Sonoma County	91,375	100,460	102,944	105,944	108,675	111,630	116,811	1,817	2,484	3,000	2,731	3,015	5,121	3,270	2,544
85 Mendocino County															
86 Fort Bragg	1,506	1,608	1,608	1,612	1,617	1,625	1,643	20	0	4	5	8	10	7	14
87 Point Arena	132	144	142	142	140	142	144	2	(2)	0	(2)	2	2	0	1
88 Ukiah	3,168	3,373	3,400	3,449	3,462	3,673	3,699	41	27	49	13	211	26	65	
89 Willits	1,049	1,104	1,104	1,106	1,108	1,116	1,127	11	0	2	2	8	11	5	0
90 Unincorporated	13,343	14,672	14,948	15,367	15,644	15,903	16,116	266	276	419	277	259	213	289	277
91 Total Mendocino County	19,198	20,901	21,202	21,676	21,971	22,459	22,729	341	301	474	295	488	270	366	353
93 Lake County															
94 Clearlake	0	3,056	3,071	3,072	3,078	3,093	3,107	611	15	1	6	15	14	10	311
95 Lakeport	1,234	1,287	1,298	1,308	1,321	1,331	1,341	11	11	10	13	10	10	11	11
96 Unincorporated	12,254	10,720	11,037	11,291	11,564	11,674	11,957	(307)	317	254	273	110	283	247	(30)
97 Total Lake County	13,488	15,063	15,406	15,671	15,963	16,098	16,405	315	343	265	292	135	307	268	292
99 Napa County															
100 Calistoga	1,133	1,163	1,167	1,177	1,207	1,210	1,213	6	4	10	30	3	3	10	0
101 Napa	14,914	16,456	16,429	16,522	16,855	17,119	17,621	300	(27)	163	263	264	502	233	271
102 St Helena	1,373	1,439	1,445	1,446	1,447	1,455	1,455	13	6	1	1	8	0	3	0
103 Yountville	481	515	559	580	537	613	666	7	44	21	17	16	53	30	19
104 Unincorporated	10,530	10,302	10,453	10,558	10,596	10,800	11,067	(30)	71	105	38	284	107	137	54
105 Total Napa County	28,431	29,955	30,053	30,353	30,702	31,277	32,022	305	90	300	349	575	745	413	359
108 Total 4-County Region	152,492	166,379	169,605	173,644	177,311	181,524	187,967	2,777	3,226	4,039	3,667	4,213	6,443	4,310	3,540

127450F1  
09/17/38  
51.56

								Annual Increase.....							1985-90	1990-90
	1980	1985	1986	1987	1988	1989	1990	1980-85 (Average)	1985-86	1986-87	1987-88	1988-89	1989-90	(Average)	(Average)	
126																
127																
128																
129																
130																
131	MULTIPLE-FAMILY HOUSING UNITS															
132																
133	Sonoma County															
134	Cloverdale	318	326	342	342	342	348	429	2	16	0	0	6	81	21	11
135	Cotati	550	619	674	678	710	736	796	14	55	4	32	26	60	35	25
136	Healdsburg	653	680	680	695	703	750	752	5	0	15	0	47	2	14	10
137	Petaluma	1,903	2,483	2,755	2,771	2,779	2,785	2,815	116	272	16	0	6	30	66	91
138	Robert Park	2,117	3,247	3,945	4,521	4,788	4,926	5,162	226	698	576	267	138	236	383	305
139	Santa Rosa	9,825	9,823	10,934	12,124	12,524	12,559	12,831	160	1,111	1,190	400	35	272	602	381
140	Sebastopol	658	740	740	790	786	839	851	16	0	50	(4)	53	12	22	19
141	Sonoma	638	738	801	803	812	876	1,065	20	63	2	9	64	189	65	43
142	Unincorporated	8,487	8,798	8,870	8,987	9,549	9,627	9,654	78	72	117	562	70	27	171	125
143	Total Sonoma County	24,263	27,454	29,741	31,711	32,993	33,446	34,355	637	2,287	1,970	1,282	453	909	1,380	1,009
144																
145	Mendocino County															
146	Fort Bragg	653	767	819	877	894	900	938	23	52	50	17	6	38	34	29
147	Point Arena	63	59	61	61	61	61	87	(1)	2	0	0	0	26	6	2
148	Ukiah	1,382	1,582	1,640	1,640	1,662	1,783	1,823	56	50	0	22	121	40	48	52
149	Willits	345	438	458	499	535	535	540	19	20	41	36	0	5	20	20
150	Unincorporated	3,275	3,446	3,468	3,498	3,562	3,582	3,582	34	22	30	64	20	0	27	31
151	Total Mendocino County	5,638	6,292	6,446	6,575	6,714	6,861	6,970	131	154	129	139	147	189	136	133
152																
153	Lake County															
154	Clearlake	0	748	772	772	774	814	841	150	24	0	2	40	27	19	84
155	Lakeport	337	390	390	431	490	490	492	11	0	41	59	0	2	20	16
156	Unincorporated	1,074	1,511	1,523	1,559	1,560	1,602	1,609	(73)	12	36	9	34	7	20	(27)
157	Total Lake County	2,211	2,649	2,685	2,762	2,832	2,906	2,942	88	36	77	70	74	36	59	73
158																
159	Napa County															
160	Callistoga	390	369	430	443	442	416	416	(6)	61	19	(7)	(26)	0	9	2
161	Napa	4,463	5,855	5,400	5,509	5,862	5,941	6,006	118	425	109	273	79	65	190	154
162	St. Helena	641	688	717	719	719	710	710	9	29	2	0	(9)	0	4	7
163	Yountville	87	100	100	102	102	102	102	3	0	2	0	0	0	0	2
164	Unincorporated	1,740	1,779	1,779	1,756	1,750	1,750	1,721	0	0	(23)	(6)	0	(29)	(12)	(2)
165	Total Napa County	7,323	7,991	8,506	8,615	8,875	8,919	8,955	132	515	109	260	44	36	193	163
166																
167																
168	Total 4-County Region	39,447	44,386	47,378	49,663	51,414	52,132	53,222	900	2,932	2,285	1,751	718	1,090	1,767	1,378



Table C2 (Continued.....page 4)  
POPULATION & HOUSING GROWTH  
4-COUNTY REGION

12745061  
03/17/90  
SL 356

	1980	1985	1986	1987	1988	1989	1990	Annual Increase.....							1985-90	1990-90
								1980-85	1985-86	1986-87	1987-88	1988-89	1989-90	(Average)	(Average)	(Average)
								(Average)								
191 MOBILE HOME HOUSING UNITS																
192																
193 Sonoma County																
194 Cloverdale	138	183	189	189	189	192	192	9	6	0	0	3	0	2	3	
195 Cotati	187	185	186	187	188	187	187	(8)	1	1	1	(1)	0	0	0	
196 Healdsburg	81	87	87	90	90	90	90	1	0	3	0	0	0	1	1	
197 Petaluma	638	787	787	857	877	877	878	31	0	78	28	0	1	18	25	
198 Rohnert Park	1,185	1,124	1,124	1,129	1,136	1,136	1,136	4	0	5	7	0	0	2	3	
199 Santa Rosa	1,600	1,987	1,987	1,932	2,112	2,112	2,110	61	0	25	180	0	(2)	41	51	
200 Sebastopol	64	65	65	65	65	65	65	0	0	0	0	0	0	0	0	
201 Sonoma	323	323	323	324	423	423	423	0	0	1	99	0	0	20	10	
202 Unincorporated	4,497	4,555	4,649	4,943	4,742	4,810	4,924	12	94	294	(281)	68	114	74	43	
203 Total Sonoma County	8,545	9,136	9,237	9,636	9,742	9,812	9,925	118	181	339	186	78	113	158	139	
204																
205 Mendocino County																
206 Fort Bragg	90	148	148	148	151	151	151	18	0	0	11	0	0	2	6	
207 Point Arena	28	23	22	28	12	12	12	(1)	(1)	(2)	(8)	0	0	(2)	(2)	
208 Ukiah	485	399	399	484	483	414	415	(1)	0	5	(1)	11	1	3	1	
209 Willits	285	285	285	198	196	196	196	0	0	(7)	(2)	0	0	(2)	(1)	
210 Unincorporated	3,434	3,835	3,913	3,987	3,951	4,839	4,116	80	78	74	(36)	88	77	56	68	
211 Total Mendocino County	4,162	4,682	4,679	4,749	4,713	4,812	4,898	88	77	78	(36)	99	78	58	73	
212																
213 Lake County																
214 Clearlake	0	3,178	3,273	3,317	3,324	3,365	3,444	636	95	44	7	41	79	53	344	
215 Lakeport	312	357	361	373	381	371	356	9	4	12	0	(10)	(15)	(8)	4	
216 Unincorporated	6,937	5,494	5,661	5,798	5,896	5,966	6,483	(381)	167	137	98	78	517	198	(51)	
217 Total Lake County	7,389	9,029	9,235	9,488	9,681	9,782	10,283	344	266	193	113	181	581	251	297	
218																
219 Napa County																
220 Callistoga	433	447	448	448	448	448	448	3	1	0	0	0	0	0	2	
221 Napa	858	937	1,019	1,047	1,008	1,039	1,185	29	22	28	41	11	6	22	26	
222 St Helena	233	235	235	235	235	233	233	0	0	0	0	(2)	0	(8)	0	
223 Yountville	229	229	231	231	231	231	231	0	2	0	0	0	0	0	0	
224 Unincorporated	2,547	2,487	2,517	2,525	2,583	2,618	2,744	(12)	38	8	58	35	126	51	28	
225 Total Napa County	4,292	4,335	4,458	4,486	4,585	4,629	4,761	21	55	36	99	44	132	73	47	
226																
227																
228 Total 4-County Region	24,388	27,162	27,661	28,359	28,641	28,955	29,859	571	499	698	282	314	984	539	555	
229																
230																
231																
232																
233																
234																
235																
236																
237																
238																
239																



									Annual Increase.....								
									1988-85							1985-90	1990-90
		1988	1985	1986	1987	1988	1989	1990	(Average)	1985-86	1986-87	1987-88	1988-89	1989-90	(Average)	(Average)	
246																	
247																	
248		1988	1985	1986	1987	1988	1989	1990									
249																	
250																	
251	TOTAL HOUSING UNITS																
252																	
253	Sonoma County																
254	Cloverdale	1,856	1,812	1,856	1,864	1,981	1,967	2,189	31	44	8	37	66	142	59	45	
255	Cotati	1,481	1,697	1,837	1,922	2,841	2,171	2,403	59	140	85	119	138	232	141	180	
256	Healdsburg	2,985	3,359	3,478	3,559	3,666	3,758	3,781	75	111	89	187	92	23	84	88	
257	Petaluma	12,540	14,438	14,945	15,417	15,839	16,271	16,760	380	507	472	422	432	489	464	422	
258	Rohnert Park	8,761	11,215	12,285	12,989	13,274	13,661	14,274	491	990	794	285	387	613	612	551	
259	Santa Rosa	35,192	33,984	41,978	44,475	46,284	47,869	48,819	942	2,874	2,437	1,729	865	958	1,623	1,283	
260	Sebastopol	2,468	2,674	2,732	2,808	2,847	2,917	2,971	42	58	76	39	78	54	59	51	
261	Sonoma	2,883	3,343	3,463	3,548	3,743	3,869	4,137	92	128	85	195	126	268	159	125	
262	Unincorporated	56,385	58,608	59,436	60,789	61,895	63,265	66,637	461	828	1,273	1,186	1,378	3,372	1,606	1,833	
263	Total Sonoma County	124,189	137,858	141,922	147,291	151,410	154,948	161,891	2,572	4,872	5,369	4,119	3,538	6,143	4,888	3,698	
264																	
265	Mendocino County																
266	Fort Bragg	2,249	2,515	2,567	2,629	2,662	2,676	2,732	53	52	62	33	14	56	43	48	
267	Point Arena	223	226	225	223	213	215	243	1	(1)	(2)	(18)	2	28	3	2	
268	Ukiah	4,875	5,354	5,439	5,493	5,527	5,878	5,937	96	85	54	34	343	67	117	186	
269	Willits	1,599	1,747	1,767	1,883	1,839	1,847	1,863	38	28	36	36	8	16	23	26	
270	Unincorporated	28,852	21,953	22,329	22,852	23,157	23,524	23,814	388	376	523	385	367	298	372	376	
271	Total Mendocino County	28,938	31,795	32,327	33,888	33,398	34,132	34,589	559	532	673	398	734	457	559	559	
272																	
273	Lake County																
274	Clearlake	8	6,982	7,116	7,161	7,176	7,272	7,332	1,396	134	45	15	96	128	82	739	
275	Lakeport	1,883	2,834	2,849	2,112	2,132	2,132	2,189	38	15	63	88	8	(13)	31	31	
276	Unincorporated	21,125	17,725	18,221	18,648	19,828	19,242	20,843	(588)	496	427	388	214	887	465	(188)	
277	Total Lake County	23,888	26,741	27,386	27,921	28,336	28,786	29,638	747	645	535	475	318	924	578	662	
278																	
279	Napa County																
280	Calistoga	1,964	1,979	2,845	2,874	2,837	2,874	2,877	3	66	29	23	(23)	3	28	11	
281	Napa	28,227	22,588	22,788	23,228	23,885	24,159	24,732	456	428	388	577	354	573	445	451	
282	St Helena	2,247	2,362	2,337	2,488	2,481	2,338	2,338	23	35	3	1	(3)	8	7	15	
283	Yountville	737	844	838	913	938	946	999	9	46	23	17	16	53	31	28	
284	Unincorporated	14,817	14,648	14,749	14,839	14,929	15,248	15,532	(34)	181	98	98	319	284	177	72	
285	Total Napa County	48,852	42,341	43,889	43,454	44,162	44,825	45,738	458	668	445	788	663	913	679	569	
286																	
287																	
288	Total 4-County Region	216,247	237,327	244,644	251,666	257,366	262,611	271,848	4,336	6,717	7,822	5,788	5,245	8,437	6,624	5,488	

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Table C3a  
RESIDENTIAL BUILDING PERMIT ACTIVITY  
SONOMA COUNTY & 4-COUNTY REGION

1274SPRI  
03/17/90  
SL356

	1985	1986	1987	1988	1989	5-Year Average
8 SINGLE-FAMILY UNITS						
10 Sonoma County						
11 Cloverdale	12	0	37	64	63	33
12 Cotati	63	171	29	150	163	115
13 Healdsburg	115	71	94	49	21	70
14 Petaluma	355	464	310	527	398	411
15 Rohnert Park	130	112	10	364	315	186
16 Santa Rosa	919	1,385	878	696	1,017	979
17 Sebastopol	76	12	11	36	25	32
18 Sonoma	44	54	37	100	45	56
19 Unincorporated	1,179	1,087	1,234	1,872	1,888	1,454
20 Total Sonoma County	2,893	3,356	2,700	3,858	3,935	3,348
22 Other 4-County						
23 Mendocino County	324	455	560	316	460	423
24 Lake County	363	276	323	284	409	331
25 Napa County	342	469	518	859	804	614
26 Total Other 4-County	1,029	1,200	1,401	1,459	1,753	1,368
28 Total 4-County Region	3,922	4,556	4,101	5,317	5,688	4,717
30 MULTIPLE-FAMILY UNITS						
32 Sonoma County						
33 Cloverdale	0	0	0	0	77	15
34 Cotati	0	4	4	14	22	10
35 Healdsburg	9	10	0	47	2	15
36 Petaluma	24	0	14	27	4	15
37 Rohnert Park	362	99	162	344	0	193
38 Santa Rosa	1,350	221	772	286	277	581
39 Sebastopol	5	0	44	11	76	27
40 Sonoma	64	23	68	20	34	43
41 Unincorporated	399	99	193	67	48	144
42 Total Sonoma County	2,221	470	1,180	816	540	1,045
44 Other 4-County						
45 Mendocino County	204	56	202	111	120	155
46 Lake County	32	85	127	54	68	73
47 Napa County	475	131	9	115	82	162
48 Total Other 4-County	711	272	418	280	270	330
50 Total 4-County Region	2,932	742	1,598	1,096	810	1,435

Table C3a (Continued.....page 2)  
RESIDENTIAL BUILDING PERMIT ACTIVITY  
SONOMA COUNTY & 4-COUNTY REGION

1274SPB1  
02/17/90  
SI 356

	1985	1986	1987	1988	1989	5-Year Average
68 ALL UNITS.....						
69						
70 Sonoma County						
71 Cloverdale	12	8	37	64	148	48
72 Cotati	71	175	33	164	185	126
73 Healdsburg	124	81	182	96	23	85
74 Petaluma	379	472	324	554	482	426
75 Rohnert Park	492	211	172	788	315	388
76 Santa Rosa	2,269	1,686	1,658	982	1,234	1,568
77 Sebastopol	81	12	55	47	181	59
78 Sonoma	188	83	185	128	79	99
79 Unincorporated	1,578	1,186	1,482	1,939	1,936	1,688
80 Total Sonoma County	5,114	3,826	3,888	4,674	4,475	4,334
81						
82 Other 4-County						
83 Mendocino County	528	511	842	427	588	578
84 Lake County	335	361	458	338	477	424
85 Napa County	817	688	527	974	966	777
86 Total Other 4-County	1,740	1,472	1,819	1,739	2,023	1,759
87						
88 Total 4-County Region	6,854	5,298	5,699	6,413	6,498	6,152

121		Table C3b				1274SPR1
122		COMMERCIAL BUILDING PERMIT ACTIVITY				09/17/90
123		SONOMA COUNTY & 4-COUNTY REGION				SL356
124						
125						5-Year
126		1985	1986	1987	1988	1989 Average
127						
128	VALUATIONS AS REPORTED (\$'000's)					
129						
130	Sonoma County					
131	Cloverdale	0	0	357	207	130 140
132	Cotati	437	223	0	168	1,767 519
133	Healdsburg	0	0	273	310	727 262
134	Petaluma	2,781	6,581	14,721	17,555	13,047 10,937
135	Rohnert-Park	16,169	19,634	6,441	3,988	6,225 10,491
136	Santa Rosa	40,135	28,194	32,430	21,714	14,013 27,297
137	Sebastopol	40	4,446	1,935	1,395	1,434 1,850
138	Sonoma	475	2,012	6,077	6,036	1,430 3,206
139	Unincorporated	15,009	8,336	11,502	7,194	14,395 11,423
140	Total Sonoma County	75,126	70,006	73,736	58,567	53,177 66,126
141						
142	Other 4-County					
143	Mendocino County	3,863	5,116	3,539	3,055	1,947 3,904
144	Lake County	1,232	3,400	4,440	1,365	2,600 2,607
145	Napa County	9,968	10,432	7,925	4,721	15,000 9,623
146	Total Other 4-County	17,063	19,008	15,904	9,141	19,555 16,134
147						
148	Total 4-County Region	92,189	89,034	89,640	67,708	72,732 82,261
149						
150	ADJUSTMENT FACTORS.....					
151						
152	Consumer Price Index	322.2	328.4	340.4	354.3	371.3
153	1989 Dollar Multiplier	1.1524	1.1306	1.0900	1.0400	1.0000
154						
155	VALUATIONS ADJUSTED TO 1990 DOLLARS (\$'000's)					
156						
157	Sonoma County					
158	Cloverdale	0	0	389	217	130 149
159	Cotati	504	252	0	176	1,767 540
160	Healdsburg	0	0	290	325	727 270
161	Petaluma	3,205	7,441	16,057	18,397	13,047 11,629
162	Rohnert Park	10,633	22,199	7,026	4,179	6,225 11,652
163	Santa Rosa	46,251	31,077	35,374	22,756	14,013 30,054
164	Sebastopol	46	5,027	2,111	1,462	1,434 2,016
165	Sonoma	547	2,275	6,629	6,326	1,430 3,441
166	Unincorporated	17,388	10,103	12,546	7,539	14,395 12,335
167	Total Sonoma County	86,574	79,174	80,429	61,377	53,177 72,146
168						
169	Other 4-County					
170	Mendocino County	6,756	5,784	3,860	3,202	1,947 4,310
171	Lake County	1,420	3,844	4,043	1,430	2,600 2,827
172	Napa County	11,487	11,063	8,644	4,940	15,000 10,390
173	Total Other 4-County	19,663	21,491	17,348	9,580	19,555 17,527
174						
175	Total 4-County Region	106,238	100,665	97,777	70,957	72,732 89,674
176						



Table C3b (Continued.....page 2)  
 COMMERCIAL BUILDING PERMIT ACTIVITY  
 SONOMA COUNTY & 4-COUNTY REGION

12745PBI  
 09/17/90  
 SL356

	1985	1986	1987	1988	1989	5-Year Average
188 BUILDING SPACE FACTOR						
189						
190 Valuation per SF (\$)	50.00					
191						
192 BUILDING SPACE (000's sf)						
193						
194 Sonoma County						
195 Cloverdale	0	0	8	4	3	3
196 Cotati	10	5	0	4	35	11
197 Healdsburg	0	0	6	6	15	5
198 Petaluma	64	149	321	368	261	233
199 Rohnert Park	373	444	141	84	125	233
200 Santa Rosa	925	638	707	455	280	601
201 Sebastopol	1	101	42	29	29	40
202 Sonoma	11	45	133	127	29	69
203 Unincorporated	348	202	251	151	208	240
204 Total Sonoma County	1,731	1,583	1,609	1,228	1,064	1,443
205						
206 Other 4-County						
207 Mendocino County	135	116	77	64	39	86
208 Lake County	28	77	97	29	52	57
209 Napa County	230	237	173	99	300	200
210 Total Other 4-County	393	430	347	192	391	351
211						
212 Total 4-County Region	2,125	2,013	1,956	1,419	1,455	1,793
213						
214 % OF 4-COUNTY REGION						
215						
216 Sonoma County						
217 Cloverdale	0.00	0.00	0.40	0.31	0.19	0.17
218 Cotati	0.47	0.25	0.00	0.25	2.43	0.60
219 Healdsburg	0.00	0.00	0.30	0.46	1.00	0.30
220 Petaluma	3.02	7.33	16.42	25.93	17.94	12.97
221 Rohnert Park	17.54	22.05	7.13	5.89	8.56	12.99
222 Santa Rosa	43.54	31.67	36.10	32.07	19.27	33.52
223 Sebastopol	0.04	4.93	2.15	2.06	1.97	2.25
224 Sonoma	0.52	2.26	6.70	8.91	1.97	3.84
225 Unincorporated	16.37	10.04	12.83	10.63	19.79	13.02
226 Total Sonoma County	81.49	78.65	82.26	86.50	73.11	80.45
227						
228 Other 4-County						
229 Mendocino County	6.36	5.75	3.95	4.51	2.68	4.01
230 Lake County	1.34	3.82	4.95	2.02	3.57	3.15
231 Napa County	10.01	11.70	8.04	6.97	20.63	11.53
232 Total Other 4-County	10.51	21.35	17.74	13.50	26.89	19.55
233						
234 Total 4-County Region	100.00	100.00	100.00	100.00	100.00	100.00

241		Table C3c					1274SP01
242		INDUSTRIAL BUILDING PERMIT ACTIVITY					09/17/90
243		SONOMA COUNTY & 4-COUNTY REGION					SL356
244							
245							5-Year
246		1985	1986	1987	1988	1989	Coverage
247							
248	VALUATIONS AS REPORTED (\$000's)						
249							
250	Sonoma County						
251	Cloverdale	0	0	0	0	0	0
252	Cotati	536	0	1,817	1,367	2,245	1,193
253	Healdsburg	0	1,372	449	147	0	394
254	Petaluma	5,602	3,604	12	0	0	1,844
255	Rohnert Park	17,684	6,229	0	2,977	3,727	6,123
256	Santa Rosa	6,720	12,912	4,808	2,352	6,399	6,654
257	Sebastopol	0	20	527	536	169	250
258	Sonoma	0	474	0	0	0	95
259	Unincorporated	2,803	5,985	97	1,208	90	2,053
260	Total Sonoma County	33,345	30,596	7,790	8,667	12,630	18,606
261							
262	Other 4-County						
263	Mendocino County	3,486	3,203	2,300	1,837	3,161	2,799
264	Lake County	1,397	783	1,555	2,167	3,375	1,855
265	Napa County	11,034	6,068	18,322	16,110	28,923	16,211
266	Total Other 4-County	15,917	10,054	22,785	20,114	35,459	20,866
267							
268	Total 4-County Region	49,262	40,650	30,575	28,781	48,089	39,471
269							
270	ADJUSTMENT FACTORS.....						
271							
272	Consumer Price Index	322.2	328.4	340.4	354.3	371.3	
273	1989 Dollar Multiplier	1.1524	1.1306	1.0308	1.0400	1.0000	
274							
275	VALUATIONS ADJUSTED TO 1990 DOLLARS (\$000's)						
276							
277	Sonoma County						
278	Cloverdale	0	0	0	0	0	0
279	Cotati	610	0	1,902	1,433	2,245	1,255
280	Healdsburg	0	1,551	439	154	0	439
281	Petaluma	6,456	4,075	13	0	0	2,103
282	Rohnert Park	20,379	7,043	0	3,120	3,727	6,854
283	Santa Rosa	7,744	14,599	5,332	2,465	6,399	7,308
284	Sebastopol	0	23	575	562	169	266
285	Sonoma	0	536	0	0	0	107
286	Unincorporated	3,230	6,767	106	1,350	90	2,309
287	Total Sonoma County	38,426	34,593	8,497	9,003	12,630	20,646
288							
289	Other 4-County						
290	Mendocino County	4,017	3,621	2,518	1,925	3,161	3,010
291	Lake County	1,610	885	1,636	2,271	3,375	1,967
292	Napa County	12,715	6,861	20,640	16,843	28,923	17,204
293	Total Other 4-County	18,343	11,367	24,853	21,073	35,459	22,220
294							
295	Total 4-County Region	56,769	45,960	33,350	30,162	48,089	42,866
296							
297							
298							
299							
300							

Table C4  
WAGE AND SALARY EMPLOYMENT--MARCH 31 EACH YEAR  
FOUR-COUNTY AREA

1274E001  
09/17/90  
SL356

		Annual Increase.....														
		(Average)												1985-90	1989-90	
		1980	1985	1986	1987	1988	1989	1990	1980-85	1985-86	1986-87	1987-88	1988-89	1989-90	(Average)	(Average)
SONOMA COUNTY																
9	Agriculture	4,300	3,900	3,900	3,800	5,100	5,100	5,100	(80)	0	(100)	1,300	0	0	240	80
10	Mining	400	600	500	700	700	700	700	40	(100)	200	0	0	0	20	30
11	Manufacturing—Food	2,800	3,700	3,700	3,900	4,500	4,800	4,700	100	0	200	600	300	(100)	200	100
12	Manufacturing—Lumber & Paper Pro	2,000	1,800	1,800	2,200	2,300	2,200	2,300	(40)	0	400	100	(100)	100	100	30
13	Manufacturing—Other	9,700	12,600	12,100	12,000	13,400	14,000	14,500	500	(500)	(100)	1,400	600	500	300	400
14	Sub-Total Primary	19,200	22,600	22,000	22,600	26,000	26,000	27,300	600	(600)	600	3,400	800	500	940	810
15	Construction	5,600	6,100	6,800	7,300	9,300	10,700	11,200	100	700	500	2,000	1,400	500	1,000	560
16	Transportation & Public Utilities	4,300	5,400	5,300	6,000	6,000	6,200	6,600	220	(100)	700	0	200	400	240	230
17	Wholesale Trade	3,400	5,200	5,300	5,100	5,700	5,900	6,500	360	100	(200)	600	200	600	260	310
18	Retail Trade	10,700	23,300	24,500	25,600	27,000	28,700	31,000	900	1,200	1,100	2,200	900	2,300	1,540	1,230
19	Finance, Insur & Real Estate	5,700	7,400	7,800	8,300	8,300	8,000	8,100	340	400	500	0	(300)	100	140	240
20	Services	10,100	24,200	25,000	27,300	29,500	30,000	33,700	1,220	800	2,300	2,200	1,300	2,900	1,900	1,560
21	Government	20,600	21,000	21,500	22,600	22,700	23,200	23,900	00	500	1,100	100	500	700	500	330
22	Total Sonoma County	95,600	115,200	118,200	124,000	135,300	140,300	148,300	3,920	3,000	6,600	10,500	5,000	8,000	6,620	5,270
MENDOCINO COUNTY																
26	Agriculture	1,550	1,475	1,475	1,500	1,750	1,700	1,800	(15)	0	25	250	(50)	100	65	25
27	Mining	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	Manufacturing—Food	275	475	600	800	775	850	925	40	125	200	(25)	75	75	90	65
29	Manufacturing—Lumber & Paper Pro	3,200	2,825	2,825	2,875	3,200	3,100	3,000	(75)	0	50	325	(100)	(100)	35	(20)
30	Manufacturing—Other	1,575	1,700	1,800	1,950	1,375	1,350	1,325	25	100	150	(575)	(25)	(25)	(75)	(25)
31	Sub-Total Primary	6,600	6,475	6,700	7,125	7,100	7,000	7,050	(25)	225	425	(25)	(100)	50	115	45
32	Construction	725	850	900	900	925	950	975	25	50	0	25	25	25	25	25
33	Transportation & Public Utilities	1,100	900	875	925	1,025	1,125	1,225	(40)	(25)	50	100	100	100	65	13
34	Wholesale Trade	625	875	1,050	1,050	1,175	1,175	1,175	50	175	0	125	0	0	60	55
35	Retail Trade	4,400	5,075	5,300	5,600	5,575	5,675	5,775	135	225	300	(25)	100	100	140	130
36	Finance, Insur & Real Estate	775	925	950	875	900	925	950	30	25	(75)	25	25	25	5	18
37	Services	4,400	5,325	5,475	5,625	5,750	5,900	6,050	105	150	150	125	150	150	145	165
38	Government	4,000	4,700	4,875	4,925	4,975	5,050	5,125	(20)	175	50	50	75	75	85	33
39	Total Mendocino County	23,425	25,125	26,125	27,025	27,425	27,800	28,325	340	1,000	900	400	375	525	640	400
LAKE COUNTY																
43	Agriculture	575	575	750	575	675	700	725	0	175	(175)	100	25	25	30	15
44	Mining	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
45	Manufacturing—Food	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	Manufacturing—Lumber & Paper Prod	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
47	Manufacturing—Other	225	225	300	325	350	375	400	0	75	25	25	25	25	35	10
48	Sub-Total Primary	800	800	1,050	900	1,025	1,075	1,125	0	250	(150)	125	50	50	65	33
49	Construction	550	1,200	725	825	750	775	800	130	(475)	100	(75)	25	25	(00)	25
50	Transportation & Public Utilities	350	400	325	325	350	375	400	10	(75)	0	25	25	25	0	5
51	Wholesale Trade	125	225	250	225	200	225	250	20	25	(25)	(25)	25	25	5	13
52	Retail Trade	1,475	2,225	2,100	2,375	2,425	2,475	2,525	150	(125)	275	50	50	50	60	105
53	Finance, Insur & Real Estate	425	550	550	550	550	550	550	25	0	0	0	0	0	0	13
54	Services	1,375	1,900	1,975	2,150	2,100	2,150	2,200	105	75	175	(50)	50	50	60	83
55	Government	1,700	2,200	2,300	2,425	2,450	2,475	2,500	100	100	125	25	25	25	60	00
56	Total Lake County	6,800	9,500	9,275	9,775	9,850	10,100	10,350	540	(225)	500	75	250	250	170	355



Table C4 (Continued.....page 2)  
WAGE AND SALARY EMPLOYMENT—MARCH 31 EACH YEAR  
FOUR-COUNTY AREA

1274ED01  
03/17/90  
SL356

								Annual Increase.....											
								1984-85								1985-90		1986-90	
								(Average)	1985-86	1986-87	1987-88	1988-89	1989-90	(Average)	(Average)				
								1980	1985	1986	1987	1988	1989	1990					
70 NAPA COUNTY																			
71	Agriculture	3,000	2,900	2,700	2,800	3,100	3,300	3,500	(20)	(200)	100	300	200	200	120	50			
72	Mining	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
73	Manufacturing—Food	1,800	2,400	2,700	2,800	3,100	3,300	3,500	120	300	100	300	200	200	220	170			
74	Manufacturing—Lumber & Paper Prod								0	0	0	0	0	0	0	0			
75	Manufacturing—Other	3,300	2,300	2,100	1,800	2,000	2,100	2,200	(200)	(200)	(300)	200	100	100	(20)	(110)			
76	Sub-Total Primary	8,100	7,600	7,500	7,400	8,200	8,700	9,200	(100)	(100)	(100)	800	500	500	320	110			
77	Construction	1,400	2,000	2,100	2,500	2,900	3,100	3,300	120	100	400	400	200	200	260	190			
78	Transportation & Public Utilities	1,300	1,200	1,200	1,100	1,200	1,300	1,400	(20)	0	(100)	100	100	100	40	10			
79	Wholesale Trade	800	900	900	1,100	1,300	1,500	1,600	20	0	200	200	200	100	140	00			
80	Retail Trade	5,800	6,900	7,600	7,600	8,000	8,300	8,600	220	700	0	400	300	300	340	280			
81	Finance, Insur & Real Estate	1,100	1,300	1,400	1,600	1,600	1,600	1,600	40	100	200	0	0	0	60	50			
82	Services	8,700	10,300	10,900	11,500	11,800	12,200	12,500	320	600	600	300	400	300	440	380			
83	Government	8,200	8,100	8,200	8,500	8,600	8,700	8,900	(20)	100	300	100	100	200	160	70			
84	Total Napa County	35,400	38,300	37,800	41,300	43,600	45,400	47,100	500	1,500	1,500	2,300	1,800	1,700	1,760	1,170			
88 TOTAL 4-COUNTY REGION																			
89	Agriculture	9,425	8,850	8,825	8,675	10,625	10,000	11,125	(115)	(25)	(150)	1,950	175	325	455	170			
90	Mining	400	600	500	700	700	700	700	40	(100)	200	0	0	0	20	30			
91	Manufacturing—Food	4,875	6,575	7,000	7,500	8,375	8,950	9,125	340	425	500	875	575	175	510	425			
92	Manufacturing—Lumber & Paper Pro	5,200	4,625	4,625	5,075	5,500	5,300	5,300	(115)	0	450	425	(200)	0	135	10			
93	Manufacturing—Other	14,000	16,025	16,300	16,075	17,125	17,825	18,425	405	(525)	(225)	1,050	700	600	320	363			
94	Sub-Total Primary	34,700	37,475	37,250	38,025	42,325	43,575	44,675	555	(225)	775	4,300	1,250	1,100	1,440	970			
95	Construction	8,275	10,150	10,525	11,525	13,075	15,525	16,275	375	375	1,000	2,350	1,650	750	1,225	800			
96	Transportation & Public Utilities	7,050	7,900	7,700	8,350	8,575	9,000	9,625	170	(200)	650	225	425	625	345	250			
97	Wholesale Trade	4,950	7,200	7,500	7,475	8,375	8,800	9,525	450	300	(25)	900	425	725	465	450			
98	Retail Trade	30,375	37,500	39,500	41,175	43,800	45,150	47,900	1,425	2,000	1,675	2,625	1,350	2,750	2,000	1,753			
99	Finance, Insur & Real Estate	8,000	10,175	10,700	11,325	11,350	11,075	11,200	435	525	625	25	(275)	125	205	320			
100	Services	32,575	41,725	43,350	46,575	49,150	51,050	54,450	1,030	1,625	3,225	2,575	1,900	3,400	2,545	2,180			
101	Government	35,300	36,000	36,075	38,450	38,725	39,425	40,425	140	875	1,575	275	700	1,000	885	513			
102	Total 4-County	161,225	188,125	193,400	202,300	216,175	223,600	234,075	5,300	5,275	9,500	13,275	7,425	10,475	9,190	7,285			

103 Annual average for Sonoma County; MLW estimates for Lake & Napa Counties

111 Annual average for Sonoma County; MLW estimates for Mendocino, Lake & Napa Counties

APPENDIX F

HOUSING ANALYSIS





## PURPOSE AND SCOPE

This section of the MEA focuses on housing in Cloverdale. Its purpose is to identify local housing needs, special needs groups, and available resources to meet those needs. Based on this information, Goals, Policies, and Programs will be prepared subsequently which will guide housing development. The following tasks were performed:

- Review of previous Housing Element.
- Inventory of existing housing stock in study area.
- Summary of household characteristics including: tenure and length of residence; discussion of overcrowding; household finance characteristics; rents and home sale prices.
- Discussion of special housing needs including: handicapped, elderly, large families, farmworkers, female heads of households, and the homeless.
- Survey of housing stock conditions and vacancy rates.
- Discussion of existing and projected housing needs and constraints including: population trends; employment trends; existing and projected housing needs; governmental constraints; and non-governmental constraints.
- Review of vacant land survey.
- Discussion of assisted rental housing at risk for conversion.
- Discussion of energy conservation procedures for the City of Cloverdale.
- Discussion of equal housing opportunities within the study area.

According to Article 10.6, Section 65583 (a), of the Government Code, a housing element must contain:

“An assessment of housing needs and an inventory of resources and constraints relevant to the meeting of these needs. The assessment and inventory shall include the following:

- (1) Analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected housing needs for all income levels. These existing and projected needs shall include the locality's share of the regional housing need in accordance with Section 65584.
- (2) Analysis and documentation of household characteristics, including level of payment compared to ability to pay, housing characteristics, including overcrowding, and housing stock condition.
- (3) An inventory of land suitable for residential development, including vacant sites and sites having potential for redevelopment, and an analysis of the relationship of zoning and public facilities and services to these sites.
- (4) Analysis of potential and actual governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including land use controls, building codes and their enforcement, site improvements, fees and other exactions required of developers, and local processing and permit procedures.
- (5) Analysis of potential and actual non-governmental constraints upon the maintenance, improvement, or development of housing for all income levels, including the availability of financing, the price of land, and the cost of construction.
- (6) Analysis of any special housing needs, such as those of the handicapped, elderly, large families, farmworkers, families with female heads of household, and families and persons in need of emergency shelter.
- (7) Analysis of opportunities for energy conservation with respect to residential development.

## PLANNING AREA DEFINITION

The documentation of housing needs and characteristics presents data principally for the incorporated area of Cloverdale. Part of the Santa Rosa, CA Standards Metropolitan Statistical Area, the City of Cloverdale consists of two Census Tracts — 1541 and 1542. In January 1990, the City of Cloverdale accounted for 1.31% of the total stock in Sonoma County, or 2,109 units.

## HOUSING ELEMENT REVIEW

Section 65588(a) provides that each local government shall review its housing element as frequently as appropriate to evaluate the following:

- (1) The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the state housing goal.
- (2) The effectiveness of the housing element in attainment of the community's housing goals and objectives.
- (3) The progress of the city, county, or city and county, in implementation of the housing element.

Such an evaluation would focus on the following:

- (a) "Effectiveness of the element" (Section 65588[a][2]): A comparison of the actual results of the earlier element with its goals, objectives, policies and programs. The results should be quantified where possible (e.g., rehabilitation results), but may be qualitative where necessary (e.g., mitigation of governmental constraints).
- (b) "Progress in implementation" (Section 65583[a][3]): An analysis of the significant differences between what was projected or planned in the earlier element and what was achieved.
- (c) "Appropriateness of goals, objectives and policies" (Section 65588[a][1]): A description of how the goals, objectives, policies and programs of the updated element incorporate what has been learned from the results of the prior element.

Chart 1 is a summary review of the current Housing Element with respect to:

- √ Goals;
- √ Implementation Policies;
- √ Programs; and
- √ Objectives.



CHART 1  
CITY OF CLOVERDALE: HOUSING PROGRESS REPORT  
1985-1990 GOALS, POLICIES, IMPLEMENTATION PROGRAMS  
AND PLANNED OBJECTIVES

Goal #1	Implementation Policies	Programs	Objective
The provision of a broad range of housing choices and an adequate housing supply for all incomes, ages, and lifestyles.	<ul style="list-style-type: none"> <li>Support new developments which provides a mix of housing types, styles, sizes and building densities and which have safe and convenient access to schools, parks, transportation, commercial facilities and employment opportunities.</li> </ul>	1. Continue to monitor the supply of vacant land and evaluate the development capability to determine if adequate sites exist to provide a range of densities including sites for mobile homes, manufactured housing, and rental units.	700 new units by 1990.
	<ul style="list-style-type: none"> <li>Encourage the provision of an adequate number of both rental and owner units in order to maintain an optimal vacancy rate.</li> </ul>	2. Develop a master plan for the expansion and improvement of public infrastructure and services to accommodate the projected growth of the City and actively seek adequate funding to provide such services.	Expand water storage capacity; improve sewer collection system; provide additional fire, police, recreation and school services, as needed.
	<ul style="list-style-type: none"> <li>Provide incentives for the integration of low and moderate income housing in existing and proposed housing developments by offering regulatory concessions, where appropriate, and employing developmental controls.</li> </ul>	3. Adopt a density bonus policy in accordance with state law to outline the process and procedure for bonus incentives; establish criteria for the selection of suitable sites and target housing types to meet the identified needs of the community.	50 new units for low/moderate income households over 5 years (10 units per year).
	<ul style="list-style-type: none"> <li>Support efforts to minimize development costs, interest rates and other housing financing costs.</li> </ul>		

CHART 1 (CONT.)

Goal #1	Implementation Policies	Programs	Objective
To conserve and rehabilitate the existing supply of affordable housing and maintain the quality and integrity of established neighborhoods.	<ul style="list-style-type: none"> <li>• Encourage owners and tenants of dilapidated or deteriorated housing units to rehabilitate or reconstruct their dwellings.</li> <li>• Preserve historic and architecturally significant structures, sites and neighborhoods within the community.</li> </ul>	4. Adopt a second unit ordinance that will identify allowable areas for the construction of additional units on large lots in single family neighborhoods and establish requirements to preserve the character of existing neighborhoods.	5 units per year or 25 additional units for lower income households by 1990.
		5. Work with local developers and actively seek sources of funding through governmental programs and private financing to meet the housing needs of low and moderate income households by coordinating with the Sonoma County Housing Authority as the principal administrator of the programs.	Evaluate the feasibility of issuing bonds (possible joint venture with other communities) to provide below market rate financing for first-time homebuyers and the construction of rental units.
		1. Survey the condition of existing housing and establish target areas by providing free inspections to identify potential hazards, code violations, and possible energy conservation measures that could be remedied through a voluntary code enforcement program.	Identify low and moderate income neighborhoods needing rehabilitation.

CHART 1 (CONT.)

Goal #1	Implementation Policies	Programs	Objective
	<ul style="list-style-type: none"> <li>• Encourage the continued owner-occupancy of the City's older housing stock and discourage high speculation in rehabilitation areas in order to conserve the existing supply of affordable housing.</li> <li>• Encourage the participation of homeowners associations and neighborhood groups in initiation street beautification programs and neighborhood restoration in areas of need.</li> </ul>	<p>2. Evaluate the adequacy of existing infrastructure in low and moderate income neighborhoods and identify problem areas.</p> <p>3. Work with the Sonoma County Housing Authority to set up a rehabilitation program and apply for rehabilitation funds such as Community Development Block Grants, Section 8 and other available programs.</p> <p>4. Develop a program to identify historic residences and seek funding to rehabilitate and maintain these structures.</p>	<p>Maintain existing public improvements where needed.</p> <p>Rehabilitate 10 units per year (50 units by 1990), and provide public infrastructure improvements in low and moderate income neighborhoods.</p> <p>Rehabilitate architecturally significant structures.</p>
To reduce residential energy consumption and promote the use of alternative energy sources	<ul style="list-style-type: none"> <li>• Encourage the use of solar energy and conservation measures in the design of new subdivisions and enforce new state energy standards.</li> <li>• Promote energy conservation measures in the rehabilitation of the City's older housing stock.</li> </ul>	<p>1. Develop a public education and demonstration program in the area of energy conservation and create an awareness of available programs by working with the local utility to evaluate municipal energy use and implement energy conservation measures in municipal buildings.</p>	<p>Reduce municipal energy consumption 20%.</p>

# CHART 1 (CONT.)

Goal #1	Implementation Policies	Programs	Objective
		2. Establish a voluntary energy conservation retrofit program in which owners and renters will be encouraged to insulate water heaters and weatherize their homes.	Weatherize 20 units per year under the existing utility program.
		3. Actively enforce new state energy standards of Title 24.	Ensure energy conservation in new developments.
		4. Adopt solar access guidelines providing design criteria and procedures for the review of development plans to ensure solar access in future housing developments.	Promote the use of solar energy.
		5. Initiate a community-wide recycling program by renegotiating the refuse disposal contract to include separate pick-up of newspapers, cans and bottles at curbside or in bins throughout the City.	Prolong life of existing landfill, reduce waste and conserve non-renewal resources.

# CHART 1 (CONT.)

Goal #1	Implementation Policies	Programs	Objective
To provide safe, decent, and affordable housing and promote equal housing opportunities for all economic segments of the community.	<ul style="list-style-type: none"> <li>Encourage housing developments which meet the special needs of elderly, handicapped, single parents and minorities.</li> <li>Encourage fair housing practices and continue efforts to ban discrimination in housing based on race, age, sex, family size, or marital status.</li> </ul>	1. Provide public information on available housing and assistance programs by referral to the Sonoma County Housing Authority in developing new programs to assist low and moderate income households.	Assistance for 25 additional households from Existing Section 8 Housing Assistance Program.
		2. Assist local residents who experience housing discrimination or landlord/tenant conflicts by referral to the Sonoma County Rental Information and Mediation Service (SCRIMS) and other local agencies than handle discrimination complaints.	Set up a process for assisting local residents with housing discrimination problems.
		3. Apply for all appropriate federal and state housing assistance programs consistent with staff capacity.	Provide 60 rental units of assisted housing for lower households through FmHA Section 515.
		4. Review development applications for the provision of handicapped access and target low income units for the special needs of elderly, single parents, large families and minority households.	Target low income units to meet the special needs of the community.



# CHART 1 (CONT.)

Goal #1	Implementation Policies	Programs	Objective
To provide a balanced residential environment and maintain a sense of neighborhood.	<ul style="list-style-type: none"> <li>• Ensure residential developments are compatible with surrounding neighborhoods in terms of architectural design, layout, and traffic circulation.</li> <li>• Encourage designs that provide adequate facilities, open space and recreational opportunities, outdoor living spaces, and privacy for each dwelling unit.</li> <li>• Promote retention of existing natural features and vegetation in the design of new developments.</li> <li>• Encourage residential developments that emphasize energy and water conservation and maximize energy efficient travel patterns.</li> <li>• Minimize housing construction in environmentally hazardous areas.</li> </ul>	<ol style="list-style-type: none"> <li>1. Evaluate proposed developments for consistency with the Goals and Policies of the City's General Plan and follow guidelines contained in the Land Use, Seismic/Safety, Open Space and Conservation Elements.</li> <li>2. Designate priority of development areas to coincide with the capacity and expansion of public facilities and determine appropriate residential densities, public infrastructure improvements and environmental impacts of projected development in these designated growth areas.</li> </ol>	<p>General Plan Consistency.</p> <p>Provision of sufficient sites with adequate facilities to accommodate projected growth.</p>

As required by State law, Cloverdale's present Housing Element includes a statement on quantified objectives. The City's quantitative objectives are summarized below in Tables 1 and 2 with regard to new construction and rehabilitation.

TABLE 1  
CITY OF CLOVERDALE  
SUMMARY AND QUANTIFIED OBJECTIVES

Objectives For the Creation Of New Housing Units 1985-1990

	<u>Very Low</u>	<u>Low</u>	<u>Moderate</u>	<u>Above Moderate</u>	<u>Total</u>
Second Units	25				25
Density Bonus			50		50
Rental		20	120		140
Mobile/Manufacture Homes		30	55		85
				<u>400</u>	<u>400</u>
TOTAL:	25	50	225	400	700

TABLE 2  
CITY OF CLOVERDALE  
HOUSING STOCK 1985-1990

Objectives For The Rehabilitation And Conservation Of The  
Existing Housing Stock

Rehabilitation	50 units	CDBG and Section 8
Weatherization	100 units	Utility Program
Housing Assistance	25 households	Section 8 rental
	60 units	FmHA Section 515

The following material summarizes the progress made on meeting the goals, policies, programs and objectives of the 1985-1990 Housing Element. With regard to Goal #1 and new construction, a total of 325 housing units were constructed which equalled 46% of the production objective. One 22 unit affordable development was built during the planning period and a 34 unit affordable development was under construction as of September 1990. There were no second units constructed although a second unit ordinance was adopted on August 1983. With regard to issuing bonds, the City in early 1989 considered several alternative financing mechanisms to assist in the provision of affordable housing. Some of these options will continue to be explored and evaluated in the Housing Element update. For instance, a redevelopment project area was established in 1987 and there is an opportunity to create an affordable housing fund through the 20% set-aside of tax increment increases.

In connection with the conservation and rehabilitation of existing housing, the City has established target areas. There is an apparent low interest on the part of owners in obtaining housing rehabilitation loans. Therefore, during the past four years, the CDBG financing has been expended on the repair of streets in low income areas. (i.e. Tarman neighborhood improvements). In 1986, the City did enact a mobile home park rent regulation ordinance. This ordinance contributes to the affordability of the existing housing stock.

Energy conservation measures were over-emphasized, in the context of State housing law, in the 1985-1990 Housing Element. Data are unavailable to determine whether municipal energy consumption was reduced by 20%. Some dwellings were weatherized under the existing utility program but the specific number is unknown.

In the area of providing affordable and equal housing opportunities, there are 16 households in the City who are financially assisted under the provisions of the Section 8 rental assistance program; the bedroom distribution is noted below:

√	Studio	1
√	1 Bedroom	2
√	2 Bedrooms	9
√	3 Bedrooms	2
√	4 Bedrooms	<u>2</u>
		16

The City does cooperate with the Sonoma County Rental Information and Mediation Services, Inc. (SCRIMS) who provides fair housing services throughout the County.

During the past five years, there were significant housing accomplishments such as:

1. Neighborhood physical and infrastructure improvements.
2. Continued financial assistance to renter households in need by the Section 8 rental assistance program.
3. Preservation of affordable housing by enactment of a mobile home park rent regulation.
4. Encouragement of a variety of housing types by enactment of a second unit ordinance.
5. Establishment of a redevelopment project area.
6. Evaluation of several alternative financial measures, including an in-lieu fee, to facilitate the production of affordable housing.

From a numerical viewpoint, the objectives were not met and overstated practical, feasible achievements. For instance, there were no density bonus or second units constructed. The new, updated housing element will focus on:

1. Residential rehabilitation alternatives.
2. A 5-year plan for use of the Redevelopment Agency Low and Moderate Housing Fund (20% set-Aside).
3. Continuation of effective housing programs and strategies.
4. Establishing quantitative objectives that represent the maximum feasible number of housing units that can be conserved, rehabilitated and constructed.



## HOUSING STOCK

During the past decade, the City's housing stock has gradually increased from 1,656 to 2,109 housing units. Most of the gain in the housing stock was in single-family detached homes. Cloverdale's housing stock characteristics are presented in Table 3.

TABLE 3  
CITY OF CLOVERDALE  
COMPOSITION OF THE HOUSING STOCK — 1980 TO 1990

	<u>1980</u>	<u>1990</u>	<u>Gain</u>
Single Family			
Detached	1,182	1,470	288
Attached	18	18	-0-
Multi-Family			
2 to 4	89	119	30
5 plus	229	310	81
<u>Mobile Homes</u>	<u>138</u>	<u>192</u>	<u>54</u>
<b>TOTAL:</b>	<b>1,656</b>	<b>2,109</b>	<b>453</b>

**Source:** 1980 Federal Census of Housing and Population. State Department of Finance, Population Research Unit, "Population and Housing Unit Estimates, Series E, January 1990.

Table construction by Castañeda & Associates.

## HOUSEHOLD CHARACTERISTICS

### Tenure and Length of Residence

According to the 1980 Census, 63.1% of all households had lived in their dwelling units for five years or less. This was true for both owners and renters, as the data below indicates:

TABLE 4  
CITY OF CLOVERDALE  
YEAR HOUSEHOLDER MOVED INTO UNIT

<u>Year</u>	<u>Number of Households</u>	<u>Percentage Distribution</u>
1979-March 1980	431	27.1%
1975-1978	573	36.0%
1970-1974	272	17.1%
1960-1969	187	11.8%
1950-1959	95	6.0%
Pre-1949	<u>32</u>	<u>2.0%</u>
	1,591	100.0%

**Source:** 1980 Census of Population and Housing, Summary Tape File (STF-4).

Table construction by Castañeda & Associates.

### Overcrowding

The Census defines overcrowding as more than one person per room (exclusive of bathroom and kitchen). According the the 1980 Census, there were only 39 occupied housing units with 1.01 persons per room (2.42%).

## Household Financial Characteristics

Income characteristics of the City per the 1980 Census are summarized below:

√	Median Household Income =	\$16,682
√	Median Owner Income =	\$18,250
√	Median Renter Income =	\$15,263

Table 5 provides a current estimate of Cloverdale's household income distribution. The income limits defining various income groups for Sonoma County are shown in Table 6.

**TABLE 5**  
**CITY OF CLOVERDALE**  
**HOUSEHOLD INCOME DISTRIBUTION — 1990**

	<u>Number of Households</u>	<u>Percentage Distribution</u>
Less than \$5,000	112	5.7%
\$5,000 to \$9,999	249	12.7%
\$10,000 to \$14,999	249	12.8%
\$15,000 to \$19,999	194	9.4%
\$20,000 to \$24,999	119	6.1%
\$25,000 to \$29,999	151	7.7%
\$30,000 to \$34,999	158	8.1%
\$35,000 to \$39,999	117	6.0%
\$40,000 to \$49,999	204	10.4%
\$50,000 to \$59,999	162	8.3%
\$60,000 to \$74,999	121	6.2%
\$75,000 to \$99,000	84	4.3%
<u>\$100,000 plus</u>	<u>48</u>	<u>2.4%</u>
<b>TOTAL:</b>	<b>1,958<sup>1</sup></b>	<b>100.0%<sup>2</sup></b>

**Source:** <sup>1</sup>Total number of households equal occupied housing units per California Department of Finance, Demographic Research Unit, Population and Housing Units, January 1, 1990.

<sup>2</sup>Percentage distribution from Urban Decision Systems, Inc., Demographic and Income Profiles, 1980, 1990 and 1995.

Table construction by Castañeda & Associates.

**TABLE 6**  
**CITY OF CLOVERDALE**  
**SONOMA COUNTY INCOME LIMITS**

<u>Income Group</u>	<u>Household Size (Persons)</u>			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Very Low	14,200	16,250	18,250	20,300
Lower	22,600	25,800	29,000	32,250
Medium	28,200	32,250	36,250	40,300
<u>Moderate</u>	<u>33,850</u>	<u>38,700</u>	<u>43,500</u>	<u>48,350</u>

**Source:** California Department of Housing and Community Development, "New Income Limits" (March 21, 1990).

## SPECIAL NEEDS GROUPS

### Handicapped

Within the Census, a disabled household is one in which the householder has an employment-related or transportation-related disability. 1980 Census statistics pertaining to Cloverdale are listed below:

- √ Work disability — 316 persons
- √ Public transportation disability — 76 persons

In California, approximately one in seven of the state's households had a disability. In general, disabled households have the following characteristics (Statewide Housing Plan 1987):

- Tend to be small;
- Tend to be elderly;
- Are predominantly low income;
- Move much less often; and
- Have below average housing costs, but, nevertheless, pay higher percentages of income for housing.

## Elderly

There is no uniform definition of elderly. According to the recent data, one in five persons residing in Cloverdale are 65 years and older. The City's population age distribution is summarized in Table 7.

TABLE 7  
CITY OF CLOVERDALE  
POPULATION AGE DISTRIBUTION — 1990

<u>Age</u>	<u>Number</u>	<u>Percentage Distribution</u>
0 to 5	335	6.9%
6 to 13	374	7.7%
14 to 17	286	5.9%
18 to 20	199	4.1%
21 to 24	223	4.6%
25 to 34	724	14.9%
35 to 44	826	17.0%
45 to 54	510	10.5%
55 to 64	437	9.0%
<u>65 plus</u>	<u>942</u>	<u>19.4%</u>
<b>TOTAL:</b>	<b>4,856</b>	<b>100.0%</b>

**Source:** <sup>1</sup>Total number of households equal occupied housing units per California Department of Finance, Demographic Research Unit, Population and Housing Units, January 1, 1990.

<sup>2</sup>Percentage distribution from Urban Decision Systems, Inc., Demographic and Income Profiles, 1980, 1990 and 1995.

Table construction by Castañeda & Associates.

Almost 25% of the households in California are made up of the elderly. General characteristics of elderly (65+) households are as follows (Statewide Housing Plan 1987):

- Have a higher homeownership rate;
- Are predominantly low income;
- Tend to live in small households;
- Are more likely to be non-family households;
- Move much less often; and
- Have much lower overcrowding rates.



With increasing age:

- Household income, household size and homeownership begins to fall; and
- Housing affordability problems begin to increase.

### Large Families

Large households, defined in the 1980 Census as households with five or more persons, have special housing needs. Large households tend to have difficulties purchasing housing because large housing units are rarely affordable and rental units with three or more bedrooms may not be common in many communities (LHEAP, December 1989). About 7% of the City's households are large families (refer to Table 8).

**TABLE 8**  
**CITY OF CLOVERDALE**  
**HOUSEHOLD SIZE DISTRIBUTION — 1990**

<u>Household Size</u>	<u>Number of Households</u>	<u>Percentage Distribution</u>
1	491	25.1%
2	689	35.2%
3 to 4	638	32.6%
<u>5 plus</u>	<u>140</u>	<u>7.1%</u>
<b>TOTAL:</b>	<b>1,958<sup>1</sup></b>	<b>100.0%</b>

**Source:** <sup>1</sup>Total number of households equal occupied housing units per California Department of Finance, Demographic Research Unit, Population and Housing Units, January 1, 1990.

Table construction by Castañeda & Associates.

## Farmworkers

Housing for farmworkers presents problems due to rural locations, seasonal nature of the work, and the need for mobility on the part of many of the workers. Of California households, .9% included farmworkers. This only represents farmworkers within a household at the time of the Census and underestimates farmworkers within the State.

The following are distinctive characteristics of California's farmworker households (Statewide Housing Plan 1987):

- They have low homeownership rates;
- They have large household sizes, and renter households are as large as those of owners;
- Married couples strongly predominate among both owners and renters, and most families include minor children;
- They live disproportionately in the housing which is in the poorest condition;
- They tend to have low incomes and have high rates of poverty; and
- They have high rates of overcrowding.

According to the 1980 Census (STF-4, summary tape file), there were 36 persons employed in the farming, forestry and fishing industries who resided in Cloverdale. Long-range projections by the Association of Bay Governments indicate a steady decline in agriculture-mining related employment in Sonoma County from 6,589 in 1980 to 4,960 in 2005. Based on these data, it is assumed that the farmworker population is not extensive now or in the future in Cloverdale.

## Female Heads of Households

Approximately 10% of California's households are made up of a female householder with children. Female householders with families have the following characteristics (Statewide Housing Plan 1987):

- They have low homeownership rate;
- They tend to be younger;
- Families with children predominate;
- They have low incomes and high poverty rate;
- Overcrowding rates are high; and
- They pay high percentages of income for housing.

The statistics below summarize data on this household characteristic per the 1980 Census:

- Family female head of household = 216
- Non-family female head of household = 266
- 27% separated, widowed, divorced

## Homeless

In Sonoma County, 3,779 persons received assistance through the AFDC Homeless Assistance Program during the one year period from July 1988 through June 1989. These statistics do not include single persons or families that are ineligible for AFDC assistance but are nonetheless homeless; therefore, the number of homeless persons in Sonoma County is probably higher than 3,779. There are no statistics specific to Cloverdale on this special needs group at this time. (Sonoma County Comprehensive Homeless Assistance Plan, July 1990.) There is one emergency shelter in Cloverdale of five (5) beds (North County Community Services.) According to the shelter's director, there were 251 men, 250 women, 333 children served during a 12 month period.

## Housing Stock Condition

Cloverdale's current housing stock includes an estimated 2,109 dwelling units as of January 1990. Most indicators show that the City's housing stock is essentially adequate. For example, in 1980 there were only five dwellings with inadequate plumbing facilities. Chart 2 summarizes the basic structural condition of the City's housing stock based on a 1986 land use survey.

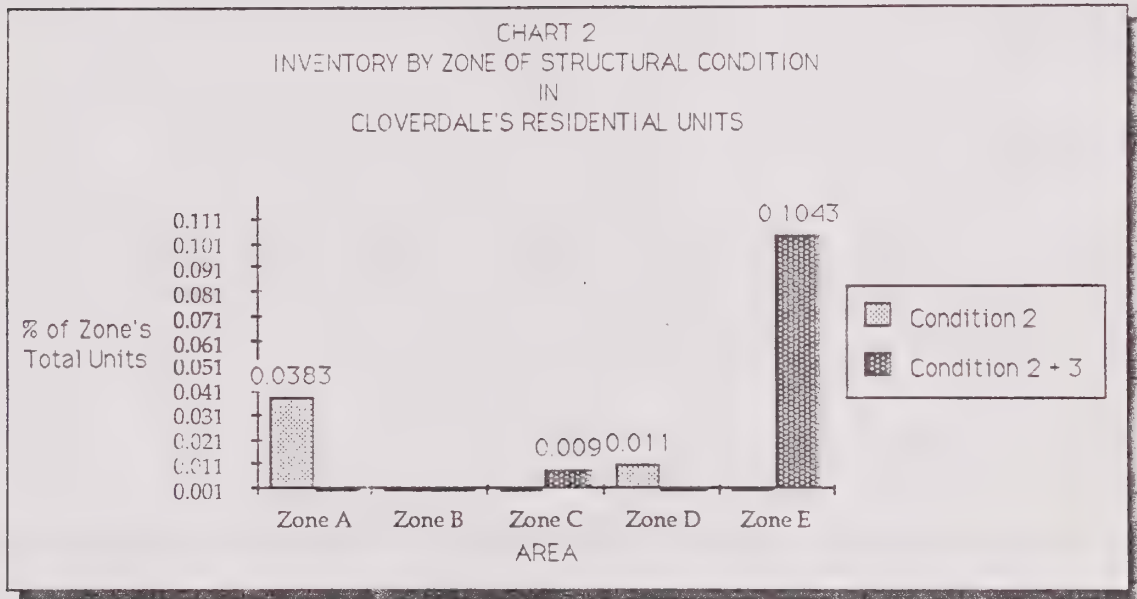
## VACANCY RATES

Data on Cloverdale's unoccupied housing units are published annually by the State Department of Finance. In the past decade, the vacancy rate — unoccupied housing units as a percentage of total stock — has increased from 3.93% to 7.15%

## EXISTING AND PROJECTED NEED

Existing need is defined as resident lower income households that are paying more than 30% of their income on housing costs. According to the Association of Bay Area Governments (ABAG), there are 263 lower income Cloverdale household paying more than they can afford for housing expenses. Of the households, 112 are owner and 141 are renter occupants. An estimated 44% of all lower income households are overpaying.

Projected need refers to the number of new housing units that should be constructed over a 5-year time frame. These projections are prepared by ABAG and are reported in Table 9. Considering that the City's housing stock is just above 2,100 dwellings,



Source: Sonoma State University Land Use Survey of Cloverdale, Fall 1986

All units are actively lived in.

Remaining unclassified percentages of the zones are sound residential units.

Condition 2: Deteriorating - defects of intermediate nature, most correctable through maintenance.

Condition 3: Dilapidated - critical defects in need of major repair.



ABAG is projecting a considerable need level in the next five years (1991-1996).

TABLE 9  
CITY OF CLOVERDALE:  
PROJECTED HOUSING NEEDS -- 1994-1995

<u>Income Group</u>	<u>Number of Housing Units</u>
• Very Low	227
• Low	125
• Moderate	172
• Above Moderate	<u>259</u>
<b>Total:</b>	<b>783</b>

Source: Association of Bay Area Governments, Housing Needs Determination, January 1989.

Table construction by Castañeda & Associates.

## VACANT LAND SURVEY

Section 65583(a)(3) of the Government Code requires that the Housing Element include a site availability analysis with respect to:

- An inventory of land suitable for residential development, including vacant sites and sites having potential for redevelopment.
- An analysis of zoning in relationship to those sites.
- Adequacy of public services and facilities to the sites.

Vacant and under-utilized sites are listed in Attachment A. As indicated the City has a capacity for approximately 2,000 dwelling units. In 1990, some affordable units were built as a part of approved projects. These are indicated on the chart. Other vacant and under-utilized properties have been deemed suitable for affordable units. Overall, the City has the capacity to meet its regional fair share allocation.

## Public Services and Facilities

There are some potential constraints to the development of housing in the future. A summary of potential constraints\* is listed below:

- √ *Water* — Upgrade supply main from well field to reservoir:
  - Additional storage reservoir in Zone 1;
  - Additional storage reservoir in Zone 2;
  - Upgrade main capacity from Cherry Creek reservoir area south to Furber Development.
- √ *Sewer* — Land acquisition for plant expansion:
  - Sewer transmission main - Lile Lane, Santana Lane, South Cloverdale Boulevard;
  - Upgrade mains to accommodate new developments in several areas.
- √ *Streets* — Upgrading/improving existing streets in order to serve the existing and new developments.
- √ *Storm Drains* — Participation in off-site storm drain to increase capacities to serve new development.

## ASSISTED RENTAL HOUSING AT-RISK FOR CONVERSION

Section 65583(c)(4) states that a housing program shall describe actions to “conserve and improve the condition of the existing affordable housing stock”. In addition, a recent amendment to housing element law (Chapter 1451, Statutes of 1989) requires all housing elements to include, by January 1, 1992, additional needs analyses and programs to address the potential conversion of assisted housing developments to non-low-income housing uses during the next ten year period. Assisted housing developments are defined to include any multi-family rental housing assisted under any of the following programs:

1. Federal: Section 8, 213, 221(d)(3), 236, 202, and 101 — CDBG and FmHA Section 515.

2. State: Multi-family revenue bond.
3. Local: Multi-family revenue bond, redevelopment, in-lieu, inclusionary, and density bonus programs.

The King's Valley Apartments is considered a development "at risk" of conversion. (The California Housing Partnership Corporation, Inventory of Federally Subsidized Low-Income Rental Units at Risk of Conversion (March 1989). This development consists of 99 housing units where the households receive Section 8 rental assistance.

There are no other developments at risk in the City at this time. In the future, the City may contribute financially and with other incentives to enable the construction of affordable housing. During a review of these developments, the City will take steps to ensure continued affordability of these units and develop a plan of action in anticipation of the conversion of the development 15 to 20 years in the future.

## ENERGY CONSERVATION OPPORTUNITIES

An analysis of opportunities for energy conservation with respect to residential development is required by Section 65583(a)(7) of the Government Code. According to the State Department of Housing and Community Development:

"The purpose of this analysis is to show that the locality has to consider how energy conservation might be achieved in residential development and how energy conservation requirements may contribute to the affordability of units."

Following are examples of local policies, plans, and development standards that have been successful in reducing energy costs or consumption:

- Promotion of compact, higher density, and infill development;
- The active, constructive enforcement by local building officials of existing state residential energy conservation standards;
- Standards for street widths, landscaping of streets and parking lots to reduce heat loss or provide shade; and

- Standards for energy efficient retrofits to be met prior to resale of homes."

The State Office of Planning and Research (OPR) has offered the following advice on this code requirement:

- ✓ Opportunities in the design and construction of individuals units.
- ✓ Opportunities in the design of subdivisions.
- ✓ Assessment of the effect of energy conservation measures on the cost of housing in the long run.
- ✓ Proximity of proposed residential development to employment centers, schools, and other services and availability of transit services.

The City enforces Title 24 of the State Building Code which establishes energy standards. Additional opportunities will be explored on infill housing sites and city-assisted affordable housing development.

## EQUAL HOUSING OPPORTUNITY

Section 65583(c)(5) requires that the housing program:

"Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin, or color."

With regard to complying with this provision of the State law, the D/HCD has offered the following advice:

"Since state and federal laws uniformly outlaw most kinds of housing discrimination, local governments' role is to identify strategies which will support and implement these laws. Such strategies may include consultation with fair housing and counseling organizations in the community to document the incidence of housing discrimination and the availability of services to address the problem. If these services are not available or are inadequate, the locality can requires technical assistance from the district office of the Department of Fair Employment and Housing to develop specific local government actions to promote fair housing opportunity.



In small localities, the local program may involve the dissemination of information on fair housing laws, and referrals to the district office of the Department of Fair Employment and Housing or other appropriate agencies. In large and/or urban jurisdictions, more direct program action would be appropriate. Examples of such programs include a commitment to use Community Development Block grant funds to support fair housing and counseling services. Also the locality may wish to create a fair housing council which can investigate and resolve discriminatory complaints, and advocate specific equal housing opportunity actions before community and business organizations."

Cloverdale is included in the Sonoma County Urban County CDBG Grant Application. A portion of grant resources are allowed to the Sonoma County Rental Information & Mediation Services, Inc. Established in 1981, SCRIMS provides services on a countywide basis including tenants who have housing discrimination complaints. In the past nine years, cases in Cloverdale have accounted for 1% of all the cases handled by SCRIMS. During this time discrimination complaints have accounted for 18% or less of all cases processed on a countywide basis. In the past year, (7-1-89 to 6-30-90), there were zero cases originating in Cloverdale.

## GOVERNMENTAL CONSTRAINTS

Section 65583(a)(4) of the Government Code mandates an analysis of how governmental factors affect the maintenance, improvement, and development for all income groups. The relevant legislation cites the following potential or actual constraints:

- Land use controls (Land Use Element and Zoning);
- Building codes and their enforcement;
- Site improvements;
- Fees and other exactions; and
- Local processing and permit procedures.



## Land Use Controls

The City's land use controls provide for a variety of housing types at densities that enable the development of affordable housing. The "High Density" land use category, for example, permits residential developments at a density of 16 plus units per acre. In time, density bonus' may be necessary if there are no financial incentives to facilitate new affordable units. The R-3 Multiple-Family district permits densities up to 20 units per acre. Residential units may also be built in some commercially-designated areas at higher densities. Consequently, the City's basic land use controls are not a major constraint to the production of affordable housing.

### Land Use Element

The current Cloverdale Land Use Plan provides for six residential land use classifications, as summarized below:

<u>Residential Classification</u>	<u>Density Range (Gross Acres)</u>	<u>Number of Acres</u>	<u>Locational Criteria</u>
Hillside	To be determined	510	West of Foothill Blvd. Plan Zone and designated generally by the 400' contour elevation at the base of the 600' contour elevation (water service level).
Low Density	.2 to 1.0	265	Acres where existing parcelization and development patterns, physical constraints and access problems all contribute to the determination of the number of units that should be located on a site.

<u>Residential Classification</u>	<u>Density Range (Gross Acres)</u>	<u>Number of Acres</u>	<u>Locational Criteria</u>
Single Family	4.0 to 6.0	265	Applied to those lands within the City that are presently or anticipated to be developed as single family residential settlements.
Medium Density	6.0 to 15.	62	Encourage and concentrate the development of housing of a more intense nature than single-family — duplexes, tri-plexes, apartments, condominiums and townhouse developments.
High Density	16.0 plus	41	Areas of intense land use near major transportation routes and highways; and in proximity to commercial and employment areas.
Planning Reserve	4.0 to 6.5	135	Large contiguous holdings within the urban expansion area of the City which represent a developable land resource base unconstrained by any predetermined street grid network.

## Zoning

- √ Estate Residential (RE): Requires rural-oriented lots at least one acre in size. RE zoning surrounds Cloverdale's urban core.
- √ Single-Family Residential (R1): Provides for suburban size lots mostly seen in subdivisions with parcel size being at least 6,000 square feet; also, limited community services related to housing via Use Permit procedures.
- √ Two-Family Residential (R2): Achieves medium density via duplexes or two separate single-family dwellings on a lot; at a density of one unit per 3,000 square feet; also, provides for limited community services and mobile home parks up to 7 units/acre via Use Permit procedures.
- √ Multiple-Family Residential (R3): Provides for the highest density allowed by Cloverdale via garden apartments, townhouses, and condominiums in addition to more conventional dwellings; a density of one unit per 1,500 square feet coupled with good design can yield densities up to 20 units per acre.
- √ Office and Multi-Family Residential (OR): Allows mixing of compatible semi-commercial and residential uses; a variety of offices, financial uses, and medical facilities can exist in harmony with medium to high density multi-family residential uses.
- √ Hillside Residential District (RH): Provides criteria for hillside development relative to the planning, design, and development of building site in hillside areas in such a fashion as to provide maximum in safety and human enjoyment and to achieve land use densities in keeping with the General Plan.

The Cloverdale Zoning Ordinance includes five residential land use categories and one mixed use district that permits residential in combination with commercial uses. The zoning districts generally are consistent with the City's growth patterns and geography, with single-family and multiple-family districts in the urban core, rural zoning surrounding the urban core, and the balance in hillside residential.

TABLE 10  
CITY OF CLOVERDALE  
RESIDENTIAL ZONING LAND USE CONTROLS

District	Purpose	Uses Permitted	Minimum Lot Area	Parking Required
R-E: Residential Estate District	To create areas of single family living at a low density surrounding Cloverdale's urban core.	Single family dwellings.	1. Corner lot - forty thousand sq. ft. 2. Interior lot - forty thousand sq. ft.	Parking is to be provided as required under Section 2.0.
R-1: Single-Family Residential District	To stabilize and protect the residential character-to promote and encourage a suitable environment for family life. The R-1 District is intended for single family homes and the community services appurtenant thereto.	Single family dwelling; Crop and tree farming; structured concurrently with or subsequent the the main building; One sign not over six square feet in area pertaining to the sale, lease or rental of property on which it is located.	1. Corner lot - seven thousand sq. ft. 2. Interior lot - six thousand sq. ft.	Parking is to be provided as required under Section 2.0.
R-2: Two Family Residential District	To provide areas for the development of duplex-ex, attached or detached two-family dwellings and dwelling groups at medium densities as in locations indicated on the General Plan.	All uses permitted in the R-1 District (Section 4.22). Duplexes or two separate one family dwellings.	1. Corner lot - seven thousand sq. ft. 2. Interior lot - six thousand sq. ft.	Parking is to be provided under Section 2.0.

TABLE 10 (CONT.)

District	Purpose	Uses Permitted	Minimum Lot Area	Parking Required
R-3: Multiple-Family Residential District	To provide suitable locations for housing such as garden apartments, townhouses, duplexes, and similar dwellings, including condominium developments. The high density category depicted by the General Plan is intended to guide development for this district.	All uses permitted in in R-2 District. Multiple family dwellings, apartments, and dwelling groups. Signs not over eight sq. ft. appurtenant to the principal use of the property.	1. Corner lot - seven thousand sq. ft. 2. Interior lot - six thousand sq. ft.	Parking is to be provided as required under Section 2.0.



## Residential Parking

The table below establishes the parking space ratios to units and numbers of bedrooms. The standards for single-family housing is 2 spaces per unit. The standards for multi-family units appear appropriate, but may need re-evaluation on a case-by-case basis depending on the market to be served and the mix of 1, 2 and 3-bedroom units. The standard for senior citizen should be re-examined. New forms of senior housing, such as congregate housing, have lower requirements than one space per unit.

**TABLE 11  
CITY OF CLOVERDALE  
RESIDENTIAL PARKING SPACE**

<u>Single-Family</u>	<u>Multi-Family</u>	<u>Mobile Home Parks</u>	<u>Senior Citizen Dwellings</u>
2 spaces per unit, 1 of which must be covered, both which must be located outside of the required setback.	1-1/2 per studio/1-bdrm. apartment, 1 of which must be covered. 2.0 spaces for each units of 2 or more bedrooms, 1 of which must be covered. At the discretion of the Planning Commission, a maximum of 30% of the required parking spaces may be set aside as compact spaces if the development is targeted for affordable housing.	1.75 spaces per unit, which may be in tandem, 1 which must be covered.	1 covered space per unit or as determined by the Planning Commission.

## **Building Codes and Their Enforcement**

The City has adopted the Uniform Building Code, 1988 edition. The Uniform Building Code was amended in a few areas including additions with respect to Master Plans, swimming pools, exterior wall coverings; roof material; roof construction; re-roofing materials; roof construction; and non-collapsability of awnings.

With regard to existing housing, the City has adopted:

- √ Uniform Code for the Abatement of Dangerous Buildings, 1988 edition.
- √ Uniform Housing Code, 1988 edition, as published by the International Conference of Building Officials.

These two codes are standard, uniform codes used throughout the State. The standards and requirements are, therefore, typical of practice in California. The enforcement of the codes may create problems for some low income residents who cannot afford to make the repairs made necessary per code requirements. In the future, a re-design home rehabilitation program should be coordinated with the City's code enforcement program.

### Site Improvement Requirements

The City requires on-site and off-site improvements typical for suburban subdivisions. These improvement requirements include for example: streets; connection to water and sewer service; street lights; curbs, gutters and sidewalks; street trees (1 per parcel); and fire suppression. Block walls, which often are an expensive off-site improvement, are not required along the perimeter of tract subdivisions.

### Fees and Other Exactions

There are a wide variety of fees for engineering, planning and development. The list below summarizes key fees by category as of September 1990.

- √ Architectural/Design Review:
 

15 or fewer dus	\$220/each
15+ dus	\$220/base fee + \$10 for each du in excess of 15
- √ Environmental Impact Report:
 

	\$1,000 minimum deposit + cost of consultant
--	--

√	General Plan Amendment	\$845/each
√	Rezoning/Prezoning	\$340/each
√	Preliminary Development Plan	\$800/base fee + \$50/per acre
√	Major Subdivision Map	\$750/base fee + \$20/each lot or du
√	Mobile Home Park	\$20/per site or \$160/per acre, whichever is less minimum \$600 per development
√	Multiple Residential (Condominiums, apartments, etc.)	\$300/per acre with a minimum of \$600
√	Single Family Residential Major Subdivision	\$40/per lot or \$160 per acre whichever is less. Minimum fee \$600/per dev- elopment
√	Large Lot Residential Major Subdivision Large Lot Residential where ave- rage. If size is 10 acre or more.	\$50/per lot with minimum of \$600 per development.

### Processing Times

The time limits shown below indicate the general span of time which is required to process a completed application. The time frames reflect what is needed to adequately evaluate and research each project, prepare Staff Reports, and provide public notice. The types of applications are split into what is noted as "Major and "Minor". This distinction relates to whether a Categorical Exemption can be issued, which involves minimal review, or a Negative Declaration or Environmental Impact Report is required in accordance with the California Environmental Quality Act.

**CHART 3**  
**CITY OF CLOVERDALE**  
**PROCESSING TIMES BY APPLICATION CATEGORY — 1990**

<u>Category of Application</u>	<u>Time Span</u>	
	<u>Minimum</u>	<u>Maximum</u>
<i>Variances:</i>		
A. Minor	15-30 days	
B. Major - with Negative Declaration	30-60 days	
<i>Use Permit:</i>		
A. Minor	15-30 days	
B. Major - with Negative Declaration	30-60 days	
<i>Subdivisions:</i>		
A. Tentative Parcel Map - with Categorical Exemption	30-45 days	
B. Tentative Parcel Map - with Negative Declaration	30-60 days	
C. Tentative Parcel Map - with Environmental Impact Report	90 days-1 year	
D. Tentative Map - with Negative Declaration	30-50 days	
E. Tentative Map - with Mitigated Negative Declaration	45-90 days	
F. Tentative Map - with Environmental Impact Report	90 days-1 year	
<i>Zone Amendment:*</i>		
A. Minor - 2 parcels or less with Negative Declaration	30-90 days	
B. Major - with Mitigated Negative Declaration	45-120 days	
C. Significant - with Environmental Impact Report	90 days-1 year	
<i>General Plan Amendments:</i>		
A. Minor - 2 parcels with less with Mitigated Negative Declaration	90-250 days	
B. Major - with Environmental Impact Report	120 days-1 year	
C. Significant - with Environmental Impact Report and Annexation	150 days-1 year	
<i>Specific Plan:*</i>		
A. Minor - with Environmental Impact Report	120 days-1 year	
B. Major - with Environmental Impact Report	150 days-1 year	

**\*Note:** The Planning Commission considers these applications in an advisory capacity, the City Council is responsible for all final action on these matters. Therefore, an additional 30-40 days must be added to accommodate City Council review.



## NON-GOVERNMENTAL CONSTRAINTS

Section 65583(a)(5) of the Government Code requires that Cloverdale's housing element incorporate an analysis of potential and actual non-governmental constraints including:

- √ Availability of financing;
- √ Price of land; and
- √ Cost of construction.

The factors of home prices and rents are considered in this sub-section.

### Availability of Financing

According the State Department of Housing and Community Development, the analysis of the availability of financing should consider whether financing is generally available, whether interest rates are significantly different from surrounding areas, and whether there are under-served areas or income groups in the community for new construction or rehabilitation loans. The D/HCD indicates knowledge of this will assist the community to select and implement responsive housing programs such as mortgage revenue bonding, a mortgage credit certificate program, and targeted low-interest rehabilitation loans.

Contact will be made with several lending institutions to request information available from Home Mortgage Disclosure Act (HMDA) and Community Reinvestment Act (CRA). This information, based on the replies of financial institutions, will be included in a Technical Appendix of the Transmittal Draft Housing Element.

An inventory of current financing costs for a 30-year fixed loan is summarized below:

- √ Sonoma National Bank — 10% with 1.5 points.
- √ San Francisco Federal Savings & Loan — 10.375% with 2 points.
- √ Great Western Bank — 10.4% with 2 points.
- √ Bank of America — 10.25% with 2.375 points.



## Price of Land

As of September 1990, there were 16 vacant parcels on the market for sale. The prices of these parcels ranged from \$120,000 for a parcel .3 acre in size to two parcels selling for \$250,000 (1.02 acres and 26.0 acres). The list below indicates the price of land:

<u>Size (in acres)</u>	<u>Asking Price</u>
14,500 sq. ft.	\$169,000
.30	\$120,000
.75	\$169,000
.90	\$144,950
1.02	\$250,000
1.15	\$179,000
1.22	\$165,000
2.70	\$165,000
2.74	\$189,000
3.65	\$199,950
4.40	\$180,000
6.00	\$215,000
6.89	\$160,000
7.00	\$170,000
26.00	\$250,000

## Cost of Construction

Information on construction costs is based upon building valuation of recent single family homes built in the City. The size, dollar value, and per square foot values are listed below:

<u>Size (sq. ft.)</u>	<u>Dollar Value</u>	<u>Per Square Foot Value</u>
1,200 sq. ft.	\$84,546	\$70.46
1,753 sq. ft.	\$118,867	\$67.81
1,900 sq. ft.	\$129,000	\$67.89

## Home Prices

Homeownership opportunities are principally available in the resale and new home markets. In mid-1990, the median resale price of home sales in Sonoma County was \$188,250 while in Cloverdale the comparable figure was \$138,600. Table 10 presents resale price data for Cloverdale and the remainder of Sonoma County.

With regard to new homes, there are at least three active developments in the Cloverdale area:

- √ Jefferson Springs
- √ Rancho de Amigos
- √ Oakbrook Estates

TABLE 12  
SONOMA COUNTY RESALE PRICES — 1990

Single-Family Residences

<u>Area</u>	<u>July 1990 All Homes</u>	<u>Jan. 1990 All Homes</u>	<u>July 1990 All Sales</u>	<u>Jan. 1990 All Sales</u>
Santa Rosa Areas:				
Northwest	\$179,125	\$179,000	38	29
Southeast	\$226,500	\$225,500	36	18
Southwest	\$154,475	\$150,000	10	9
Northeast	\$232,500	\$242,000	36	30
<i>All Santa Rosa</i>	<i>\$189,500</i>	<i>\$186,750</i>	<i>120</i>	<i>86</i>
Healdsburg	\$165,000	**\$395,000	10	4
Cloverdale	**\$138,600	\$155,000	1	5
Sebastopol	**\$200,000	\$180,000	3	8
Sonoma	\$196,000	\$214,500	18	10
Petaluma Areas:				
East	\$197,500	\$216,000	16	23
West	\$222,750	\$255,000	8	13
Cotati-Rohnert Park	\$185,750	\$169,000	27	14
Windsor Area	\$170,000	\$220,000	13	11
Russian River	\$147,750	\$130,500	12	14
<i>All Sonoma County</i>	<i>\$188,250</i>	<i>\$185,750</i>	<i>228</i>	<i>188</i>
California Median	\$196,821+			
Bay Area Median	\$266,997+			

Condominiums

	<u>July 1990</u>	<u>January 1990</u>
Santa Rosa	\$125,500	\$123,000
Petaluma	\$180,250	\$156,475
Cotati-Rohnert Park	\$120,000	\$112,950
California Median	\$147,523+	

Country Properties\*

<u>Area</u>	<u>July 1990</u>	<u>Jan. 1990</u>	<u>July Sales</u>	<u>Jan. Sales</u>
Santa Rosa	\$334,000	\$350,000	12	13
Sonoma County	\$376,258	\$265,500	59	50

**Source:** John Favre, Prudential California Realty, Santa Rosa, 528-7653, based on figures from the Sonoma County Multiple Listing Service.

\* Country denotes homes outside of the City limits.

\*\* Median based on small samples with one sale having the potential to skew figures.

The Jefferson Springs development has the following price distribution:

√	Plan 1	\$169,500
√	Plan 2	\$185,900
√	Plan 3	\$197,900
√	Plan 4	\$209,000

The Rancho de Amigos development offers home in the \$179,000 to \$199,000 price range. At this time, no data are available for the Oakbrook Estates.

Rental housing is an important part of Cloverdale stock. As noted earlier, there is one low-income rental development at risk of conversion to market rate housing. Among the major apartments in the City are:

- √ The Trees
- √ Foothill Apartments
- √ Kings Valley
- √ Vineyard Manor
- √ Divine Apartments
- √ Cloverdale Garden Apartments



## ADEQUATE SITES LAND SURVEY - CLOVERDALE

SITE	POTENTIAL TYPE OF UNITS	LOCATION/ ADDRESS	APPROXIMATE GROSS SQUARE FEET	SITE CHARACTERISTICS	ACCESS TO INFRASTRUCTURE		ZONING <sup>1</sup>	NET SQ. FT. <sup>2</sup>	NET DWELLING UNIT CAPACITY <sup>3</sup>
					YES	NO			
A. Westview Subdivision	Market Rate	South of Antonio St. North of Second St. near City Park	(2.25 ac.) 98,010 sq. ft.	1 lot subdivided	water	sewer road	R-2		8 units
B. Jefferson Springs	Market Rate	North of North St. along Cloverdale Creek	(37.05 ac.) 1,613,898 sq. ft.	400 elevation existing use vineyard (28 parcels)	water	sewer road	R-1, FD		166 units
C. William Victoria	Market Rate	North of North St. West along Jefferson St.	(9.5 ac.) 413,820	1 parcels	water	sewer road	R-1		29 units
D. Vineyard Meadows	Market Rate	West of Franklin St.	(9.33 ac.) 406,414.8 sq. ft.	1 parcels	road	sewer water	R-1		48 units
E. Rancho de Amigo	Market Rate/ Affordable	South of Hot Springs Rd. West of Cloverdale Blvd.	(55 ac.) 2,395,800 sq. ft.	11 parcels	road	sewer water	SED F SFC MEA C RP OS		454 max. units <sup>4</sup>
F. Cloverdale Garden Apartments	Affordable FHWA Senior-Low Income	Boundary South St. Clark Ave.	(3.70 ac.) 161,389 sq. ft.	1 parcels	water	sewer road	R-1		51 units

Continued

ADEQUATE SITES LAND SURVEY - CLOVERDALE (Cont.)

SITE	POTENTIAL TYPE OF UNITS	LOCATION/ ADDRESS	APPROXIMATE GROSS SQUARE FEET	SITE CHARACTERISTICS	ACCESS TO INFRASTRUCTURE		ZONING <sup>1</sup>	NET SQ. FT. <sup>2</sup>	NET DWELLING UNIT CAPACITY <sup>3</sup>
					YES	NO			
G. Vacant	Market Rate/ Affordable	Citus Fair North of South St. East of Washington School	(4.82 ac.) 210,000 sq. ft.		water sewer road		TC (Thoroughfare Comm.)	168,000 sq. ft.	56 units
H. Vacant	Market Rate/ Affordable	North of South St. East of Franklin St.	(10.5 ac.) 457,380 sq. ft.	1 parcel	water sewer road		TC (Thoroughfare Comm.)	365,904 sq. ft.	122 units
I. Vacant	Market Rate/ Affordable	South of South St. East of Healdsburg St.	(1.15 ac.) 50,000 sq. ft.	3 parcels	water sewer road		TC	40,000 sq. ft.	13.33 units
J. Vista View Heights (Pending)	Market Rate	NE area of City Vista View Drive traverses	(32 ac.) 1,393,920 sq. ft.	2 parcels	water sewer road		R-1		32 units
K. Clover Springs M.P. Rosen (Not Approved)	Market Rate	North of Hot Springs Rd. West of Cloverdale Blvd.	(514 ac.) 22,389,840 sq. ft.	1 parcel	water sewer	road access needed	R-1 SFD		554 units
L. Vacant	Market Rate/ Affordable	West of Cloverdale Blvd. North of Brookside Dr.	(1.39 ac.) 60,548.4 sq. ft.		water sewer road		O-R	48,438.72 sq. ft.	32.29 units

Continued

ADEQUATE SITES LAND SURVEY - CLOVERDALE (Cont.)

SITE	POTENTIAL TYPE OF UNITS	LOCATION/ ADDRESS	APPROXIMATE GROSS SQUARE FEET	SITE CHARACTERISTICS	ACCESS TO INFRASTRUCTURE		ZONING <sup>1</sup>	NET SQ. FT. <sup>2</sup>	NET DWELLING UNIT CAPACITY <sup>3</sup>
					YES	NO			
M. Under-Utilized	Market Rate/ Affordable	North of Hillview Dr. East of Cloverdale Blvd.	(1.38 ac.) 601,128 sq. ft.		water sewer road		R-1	48,090.24 sq. ft.	8.02 units
N. Under-Utilized	Market Rate/ Affordable	North of South St. East of Cloverdale (old PG&E substation)	(1.26 ac.) 54,885.6 sq. ft.		water sewer road access		T-C	43,908.48 sq. ft.	14.6 units
O. Vacant	Market Rate/ Affordable	North of Fourth East of Cloverdale Blvd.	(4 ac.) 174,240 sq. ft.	1 parcel	water sewer road		R-3	139,392 sq. ft.	23.23 units
P. Under-Utilized	Affordable	Shopping Center between Hillview Dr. and Brookside Dr.	(2.05 ac.) 89,290 sq. ft.	Northern 1/3 of site vacant.	water sewer road		GC	71,432 sq. ft.	23.81 units
Q. Vacant	Market Rate	South of Lake St. East of the railroad	(7.58 ac.) 330,000 sq. ft.		water sewer road		S-C	264,000 sq. ft.	88 units
R. Under-Utilized	Market Rate	West of Russian River South of Lake St.	(7.34 ac.) 319,730.4 sq. ft.	400 elev. 1 parcel	water sewer	road access needed	R-1 Log Pond	255,784.32 sq. ft.	42.6 units
S. Vacant	Market Rate	West of Russian River North of First St.	(15.15 ac.) 659,934 sq. ft.	2 parcels	water sewer	road access needed	R-1	527,947.2 sq. ft.	88 units

Continued

ADEQUATE SITES LAND SURVEY - CLOVERDALE (Cont.)

SITE	POTENTIAL TYPE OF UNITS	LOCATION/ ADDRESS	APPROXIMATE GROSS SQUARE FEET	SITE CHARACTERISTICS	ACCESS TO INFRASTRUCTURE		ZONING <sup>1</sup>	NET SQ. FT. <sup>2</sup>	NET DWELLING UNIT CAPACITY <sup>3</sup>
					YES	NO			
T. Under-Utilized	Market Rate	East of Cloverdale Creek	(14 ac.) 609,840 sq. ft.	1 parcel	water sewer	road access needed	R-1	384,000 sq. ft.	64 units
U. Under-Utilized	Market Rate/ Affordable	North of the City Park	(9.02 ac.) 392,911.2 sq. ft.		water sewer	road access needed	R-1	314,328.96 sq. ft.	52 units
V. Vacant	Market Rate/ Affordable	North of Alter St. along Cloverdale Blvd. South of South St.	(2.06 ac.) 90,000 sq. ft.		water sewer road		R-1	72,000 sq. ft.	12 units
W. Under-Utilized Agricultural	Market Rate/ Affordable	Betw. Tarman Dr. and Cloverdale Blvd. North of Hillview Dr.	(2.15 ac.) 93,654 sq. ft.	1 parcel	water sewer road		R-1	74,923.2 sq. ft.	12.48 units
X. Vacant	Market Rate	North of University along Cloverdale Creek	(6.31 ac.) 275,000 sq. ft.	1 parcel	water sewer road		R-3	220,000 sq. ft.	36.6 units

TOTAL UNDER CONSIDERATION                      2,030.96 units

Notes: Vacant and Under-Utilized land assumed maximum buildout.

<sup>1</sup> Zoning	Lot Size	Max. Units/Acre
M	Dwelling Units of any kind not permitted	
G-C	3,000 sq. ft. assumed (since density is discretionary)	14.52 units/acre

Continued

Notes (Cont.):

L-C	3,000 sq. ft. assumed	
T-C	3,000 sq. ft. assumed	
S-C	3,000 sq. ft. assumed	
R-1	6,000 sq. ft.	7.26 units
R-2	6,000 sq. ft.	7.26 units
R-3	6,000 sq. ft.	7.26 units
R-E	40,000 sq. ft.	1.089 units
O-R	1,500 sq. ft.	29.04 units

<sup>2</sup>Gross square footage was multiplied by .80 to estimate the net square footage. A twenty percent reduction in the site area accounts for necessary easements, dedications, etc. on vacant or under-utilized sites. This reduction was not taken for approved projects.

<sup>3</sup>Density is consistent with the number of units approved, regardless of whether a higher density could be achieved.

<sup>4</sup>Forty-five affordable units built and occupied in 1990.





# LAND USE SURVEY ZONES

## LEGEND:

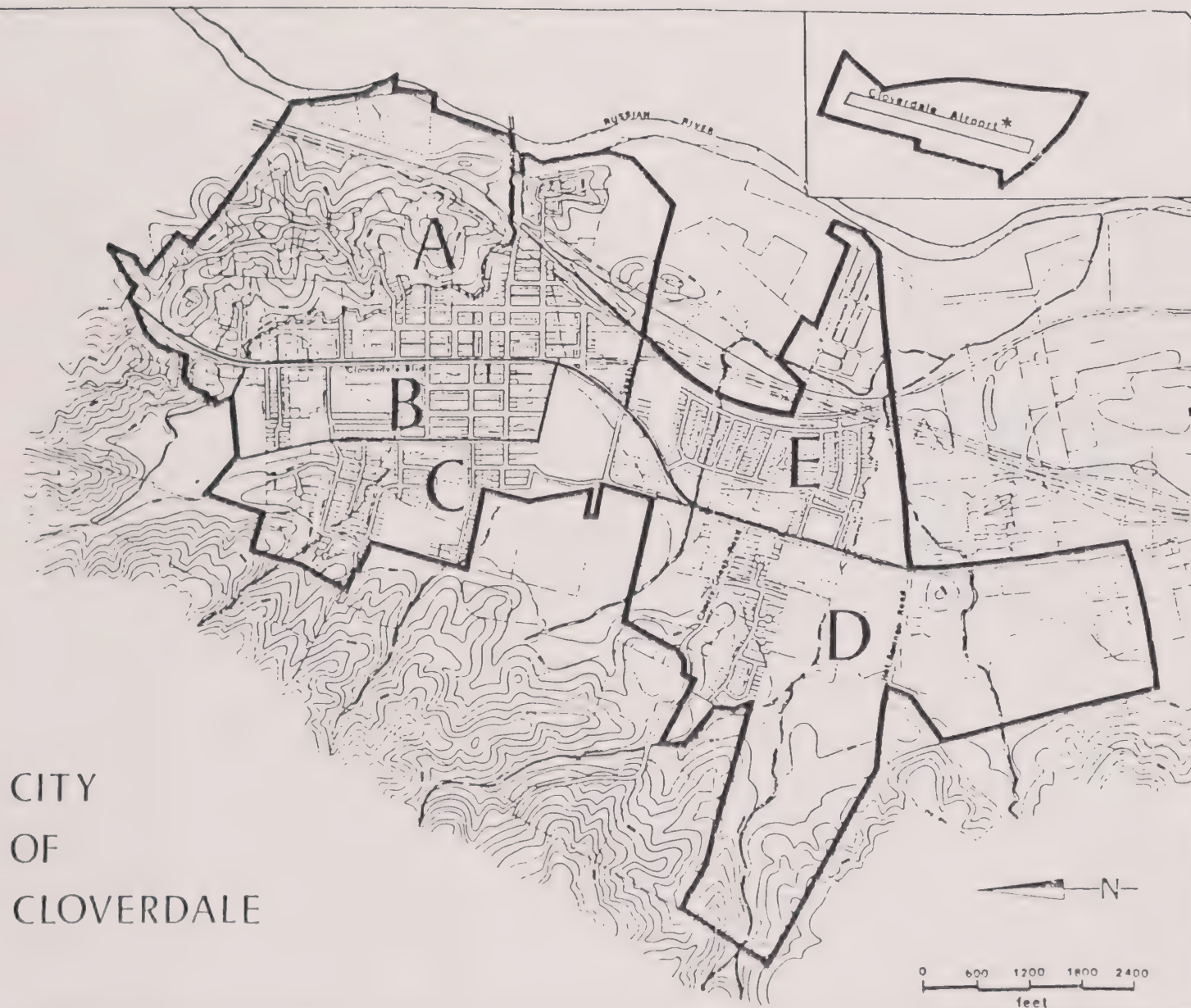
### BOUNDARIES

- SURVEY ZONES
- CITY LIMITS

\* Located 1 mile southeast of  
southern city limits.

### Sources:

Sonoma State University  
Planning Workshop-1986 and  
Brelje and Race Associates



CITY  
OF  
CLOVERDALE



**APPENDIX G**  
**TRAFFIC ANALYSIS**





**MASTER  
ENVIRONMENTAL ASSESSMENT  
TRANSPORTATION/CIRCULATION  
SECTION**

**FOR THE  
CITY OF CLOVERDALE**

**By  
TJKM Transportation Consultants  
4637 Chabot Drive, Suite 214  
Pleasanton, California 94588  
(415) 463-0611**

**January 10, 1991**

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FUTURE CIRCULATION NEEDS.....	4
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## APPENDICES

- A Description of Intersection Capacity Analysis
- B Results of the Intersection Capacity Analysis

## FIGURES

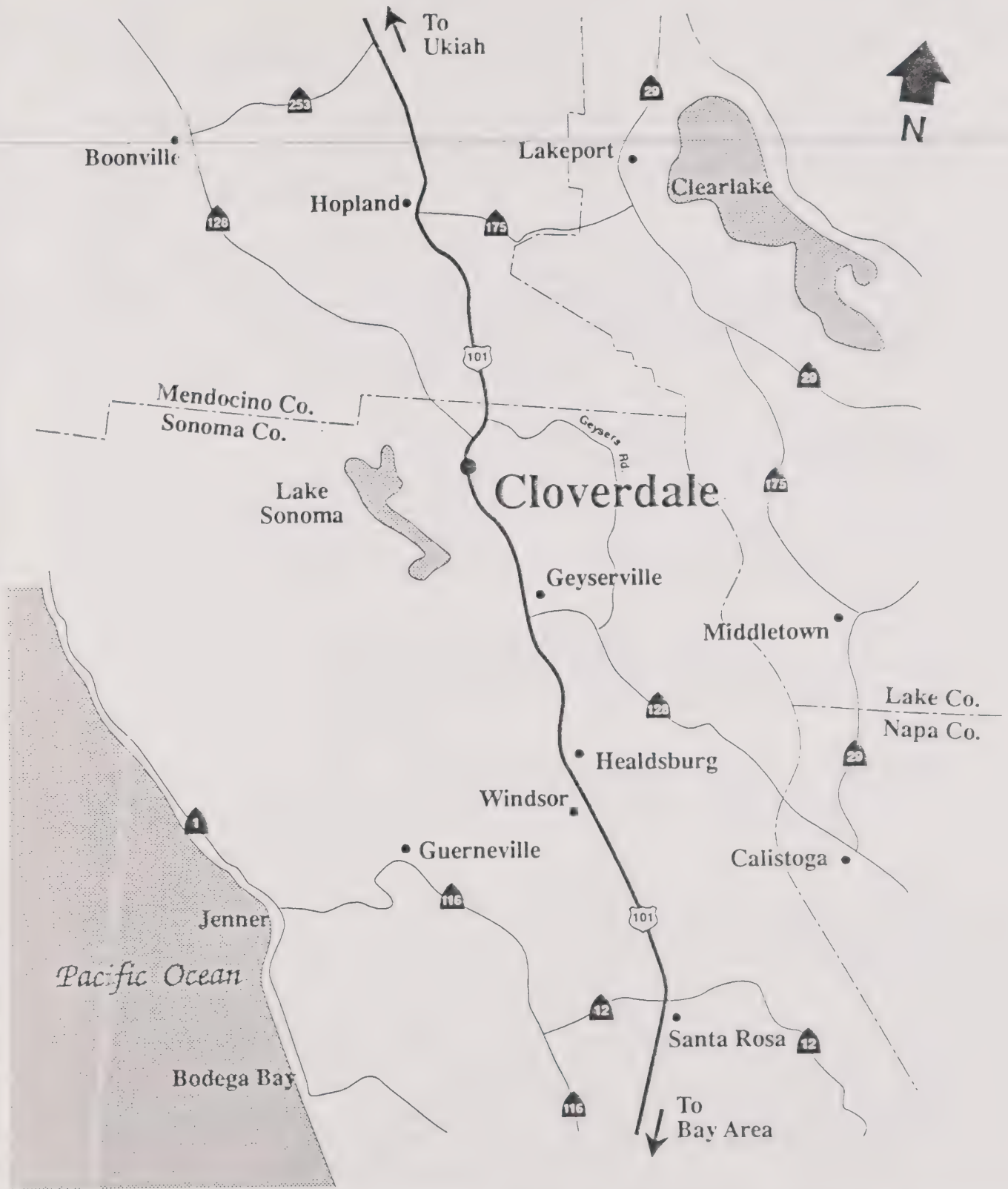
## FOLLOWING PAGE

1	Location Map.....	1
2	Study Area.....	2
3	Existing Average Daily Traffic Volumes.....	3
4	Existing Peak Hour Traffic Volumes .....	3
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## INTRODUCTION

The transportation and circulation section of the Master Environmental Assessment (MEA) was developed by TJKM Transportation Consultants. The report summarizes existing traffic conditions, future circulation needs, and land use issues. The location of the City of Cloverdale is shown in Figure 1.





## CLOVERDALE GENERAL PLAN

LOCATION MAP

**TJKM**

FIGURE

1





## EXISTING CONDITIONS

### Circulation System

The existing circulation system in the City of Cloverdale has been influenced by several features. These features include mountainous terrain, the Russian River which traverses the area from north to south, and the North West Pacific Railroad line which parallels the river.

The existing circulation system within the study area is dominated by U.S. 101, which currently carries both local and regional traffic through the center of Cloverdale. A grid system serves the central core area of the City. Beyond the downtown core and adjoining residential area, there are intermittent residential streets intersecting with U.S. 101 to the north and south. A map showing the existing circulation system is shown in Figure 2.

Cloverdale Boulevard (U.S. 101) provides regional access to the City of Cloverdale. It carries most north-south local traffic as well as regional through traffic. It is a two-lane rural highway north of the City limits; two lanes with a two-way left-turn lane between the northern City limits and Third Street; four lanes between Third Street and Railroad Avenue; two lanes with a two-way left-turn lane between Railroad Avenue and the southern City limits; and a four-lane freeway south of the City limits.

State Route 128 (S.R. 128) is a two-lane rural highway which connects U.S. 101 with the Mendocino coast area. The U.S. 101/State Route 128 connection, north of the Cloverdale City limits, is an unsignalized intersection with STOP sign control on the State Route (S.R.) 128 approach.

First Street provides major east-west access within the City limits. It also provides access to the Russian River and eastern foothill area. The intersection of First Street/Cloverdale Boulevard is the only signalized intersection in the City. It operates under a two-phase operation.

Roads which access the western foothill area include Cherry Creek Road and Hot Springs Road. These roads are rural in nature and intersect with Cloverdale Boulevard, south of the downtown area. Elbridge Avenue intersects Cloverdale Boulevard south of Hot Springs Road and serves as the access to the Rancho DiAmigos residential subdivision. Other minor collector streets in the study area include Washington Street, Jefferson Street and Franklin Street. These streets provide north-south access immediately west of the downtown area. The intersection of Franklin Street and Cloverdale Boulevard should be considered a critical intersection in the City because it provides access to the residential neighborhoods, west of downtown. The intersection is unsignalized with STOP sign control on the Franklin Street approach.

### Existing Traffic Volumes

Existing traffic volumes on U.S. 101 were available from *Caltrans 1988 Traffic Volumes* and from previous traffic studies which are noted in the Reference section. To supplement these counts, traffic volumes were counted by machine at key





## CLOVERDALE GENERAL PLAN

STUDY AREA



FIGURE

2





locations in the City of Cloverdale. These counts were taken between November 6, 1990 and November 8, 1990. The existing average daily traffic volumes (ADT) in the City of Cloverdale are shown in Figure 3. Traffic on Cloverdale Boulevard varies from 11,600 vehicles per day, north of S.R. 128, to 20,400 vehicles per day, south of First Street. The directional peak hour traffic volumes are shown in Figure 4.

## **Existing Operating Conditions**

The intersection of Cloverdale Boulevard and First Street acts as a major bottleneck in the U.S. 101 corridor. On holiday weekends, major delay and Level of Service F conditions are experienced in the City at this location. During normal weekday operations, the signal operates under a more acceptable level of service (LOS). The majority of other intersections in the City operate at acceptable levels of service during the weekday peak hours.

Peak hour turning movements were also taken at the intersections of Cloverdale Boulevard/First Street and U.S. 101/S.R. 128. Volume-to-capacity analyses were performed using these counts to evaluate existing conditions and to determine existing levels of service. These two intersections were analyzed using the critical lane method which involves consideration of "critical" (or high volume) conflicting movements. A description of this intersection capacity analysis method is included in Appendix A. The U.S. 101/S.R. 128 intersection was also analyzed using the unsignalized intersection capacity method described in the *1985 Highway Capacity Manual*.

The level of service classification system ranks street and highway operations based on the amount of traffic and traffic conditions. Briefly, the level of service ranking system is a scale with a range of LOS A through LOS F. Level of Service A represents free flow conditions and LOS F represents jammed conditions. A description of these designations is provided in Appendix A.

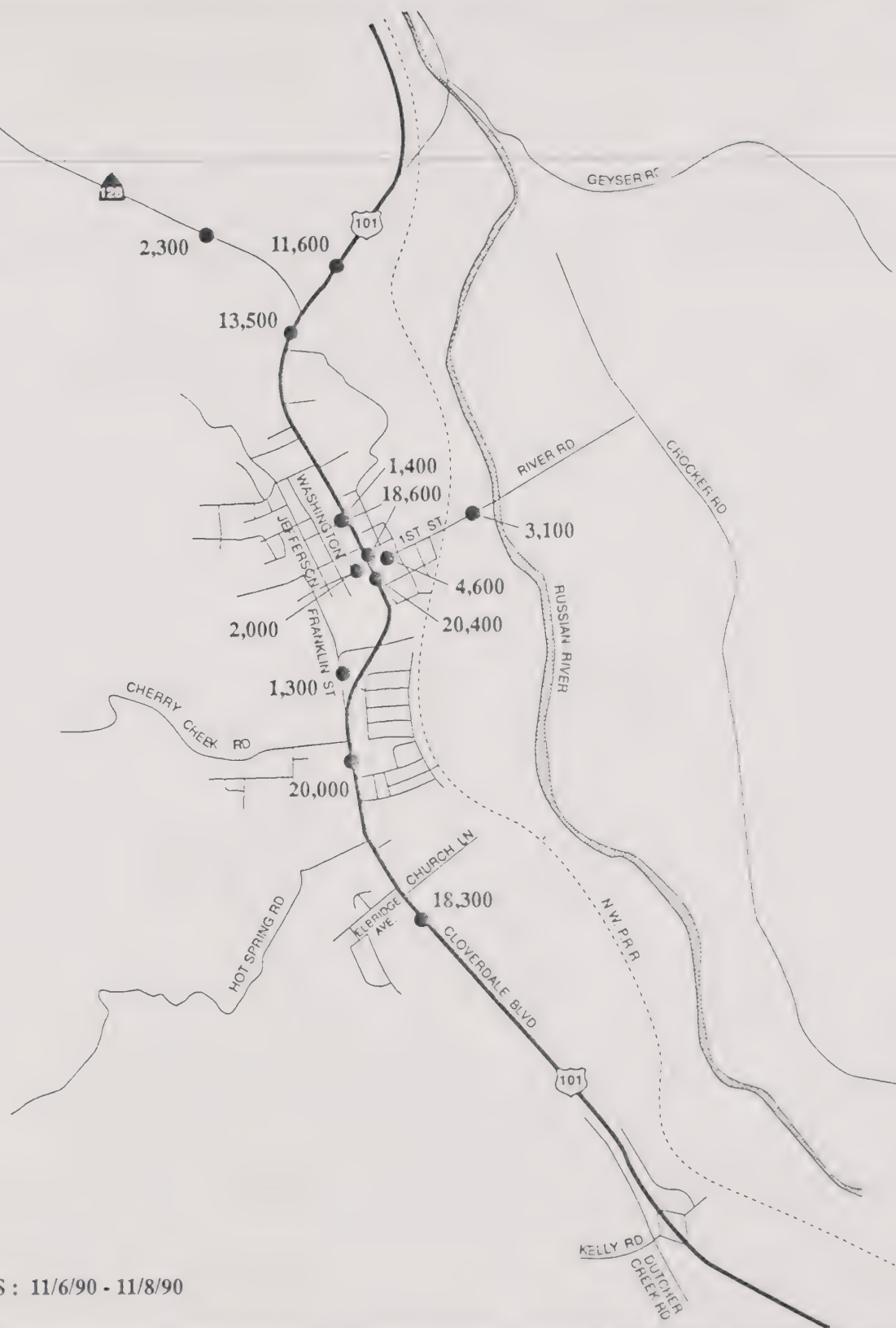
Currently, the Cloverdale Boulevard/First Street intersection is operating with a V/C ratio of 0.68 and a Level of Service B, indicating slight delay during the weekday p.m. peak hour. As a whole, the U.S. 101/S.R. 128 intersection is operating with a Level of Service A during the weekday p.m. peak hour. However, based on the unsignalized level of service analysis, the eastbound left turn from S.R. 128 to northbound U.S. 101 is operating with a Level of Service D, indicating long traffic delays during the weekday p.m. peak hour. The intersection calculation sheets which include the p.m. peak hour turning movements are shown in Appendix B.

## **Mitigation Measures**

There are mitigation measures which are currently warranted under existing traffic conditions. The operations at the intersection of Cloverdale Boulevard and First Street could be improved by prohibiting left-turn movements from Cloverdale Boulevard during peak hours. This prohibition would improve the capacity of the Cloverdale Boulevard approaches to the intersection. Currently, these approaches do not have exclusive left-turn lanes.

The southbound Franklin Street approach at Cloverdale Boulevard is aligned in a non-standard manner which requires a merge movement for the southbound Franklin Avenue approach. The City should consider realigning Franklin Avenue to create a standard right angle approach to Cloverdale Boulevard.





DATE OF COUNTS : 11/6/90 - 11/8/90

## CLOVERDALE GENERAL PLAN

EXISTING AVERAGE DAILY TRAFFIC



FIGURE

3





## CLOVERDALE GENERAL PLAN

EXISTING PEAK HOUR TRAFFIC



FIGURE  
4





## FUTURE CIRCULATION NEEDS

### Planned Circulation Improvements

The State Transportation Improvement Plan (STIP) includes a freeway bypass along the east side of Cloverdale. The bypass will be developed initially as a four-lane freeway with the provision for future expansion to six lanes. A southern interchange would be constructed by 1991, and the full bypass with two additional interchanges is to be constructed by 1994. This would relieve a projected 50 percent of the existing traffic including the majority of the truck traffic on Cloverdale Boulevard. The preferred bypass alignment with interchange locations as identified by Caltrans plans is shown in Figure 5.

The City General Plan shows Foothill Boulevard as an arterial to be extended south to Kelly Road. The City owns the Foothill Boulevard right-of-way, and intends to require funding participation by benefiting new developments. Foothill Boulevard would function as a minor arterial, having two travel lanes with turn lanes at intersections, and Class II bicycle lanes. The proposed Foothill Boulevard extension and other proposed extensions which were identified in the previous general plan are shown in Figure 6.

### Downtown Plan

A downtown plan is currently being completed by Michael Black and Associates for the City of Cloverdale. This plan recommends both land use and circulation modifications to the downtown area bounded by Fourth Street on the north, Lake Street on the south, Main Street on the east, and Commercial Street on the west. Under this plan, Broad Street would be closed and the character of Cloverdale Boulevard would be significantly changed. Diagonal parking would be added and a traffic circle would be installed on Cloverdale Boulevard between First Street and Second Street. These modification would significantly reduce the traffic carrying capacity of Cloverdale Boulevard near downtown.

### Available Future Traffic Projections

Available future traffic projections were obtained from *Draft EIR for Cloverdale Redevelopment Project*, April 1987. Details of this redevelopment project were not available. The projected traffic volumes in the study area are shown in Figure 7. These volumes are based on completion of the U.S. 101 bypass.

With the development of a new land use plan for the City of Cloverdale, new future traffic projections will be developed. These projections will incorporate the impacts of the freeway bypass, the downtown plan, and addition of new road extensions.

### Circulation Issues

A number of critical circulation issues should be reviewed and resolved as part of the General Plan. These issues are related to the freeway bypass, to the downtown plan and to the existing circulation system as well.





## CLOVERDALE GENERAL PLAN

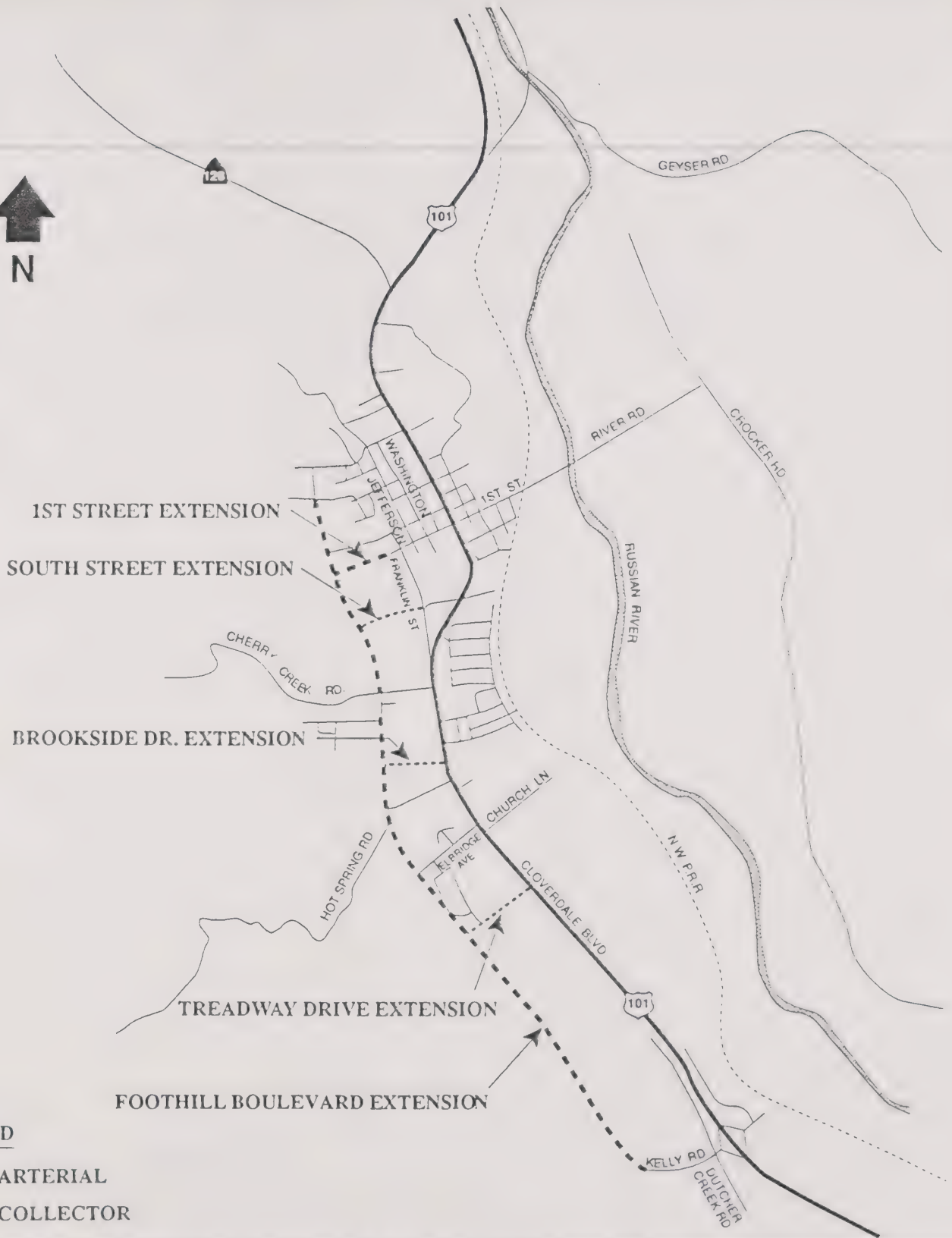
PREFERRED U.S. 101  
BYPASS ALIGNMENT



FIGURE  
5







**LEGEND**

- ARTERIAL
- ..... COLLECTOR

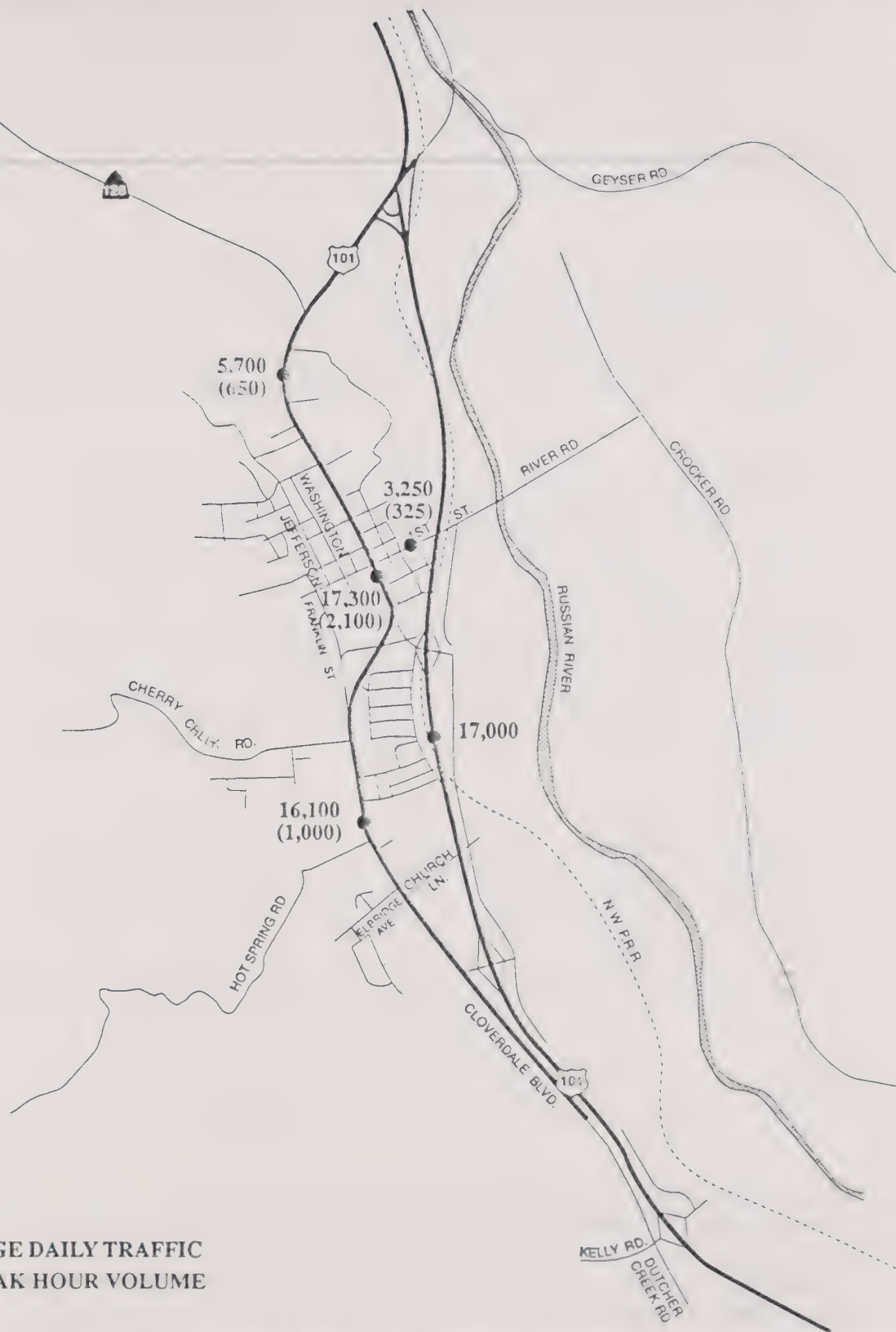
**CLOVERDALE GENERAL PLAN**

**PROPOSED  
GENERAL PLAN EXTENSIONS**



**FIGURE  
6**





### LEGEND

X,XXX = AVERAGE DAILY TRAFFIC  
(XXX) = P.M. PEAK HOUR VOLUME

## CLOVERDALE GENERAL PLAN

PROJECTED FUTURE  
TRAFFIC VOLUMES



FIGURE  
7





The completion of the Cloverdale Bypass will have a major impact on the circulation in the City. Although it will eliminate the majority of through traffic in the City, it will change the circulation pattern of most local traffic. With the bypass, the major travel demand of local traffic will be for east-west routes rather than north-south. Local traffic which now travels north or south on Cloverdale Boulevard will shift to east-west streets to access the new interchanges. This change should be considered in classifying streets in the Circulation Element of the General Plan. Streets which are now classified as collectors will operate as arterials with the addition of the bypass.

It should be noted that the proposed interchange alignments as proposed by Caltrans may be a low standard design which may not accommodate the capacity needs of the City of Cloverdale. The connections to Cloverdale Boulevard are also very low standard designs with potential operational problems. The City should determine if these interchange designs and connections could be modified to accommodate the City's General Plan.

If the downtown plan is developed, the proposed circulation system in the downtown area would also have a major impact on the circulation pattern of local traffic. The downtown plan would reduce the through traffic capacity of Cloverdale Boulevard and essentially cut off a continuous arterial through the center of the City. The City should consider providing an arterial which would function as a bypass of downtown from the northern City area to the new central interchange. With the existing circulation system, the downtown plan and the freeway bypass, all local traffic originating north of the downtown area would be forced to either travel through the downtown area or travel north to the northern interchange. An alternative would be to modify the downtown plan and maintain a continuous arterial operation on Cloverdale Boulevard.

New residential developments and proposed developments along the Cloverdale Boulevard corridor may create a need for traffic signals on Cloverdale Boulevard. The need for additional traffic controls should be continually evaluated with each subdivision proposal. The City should consider collecting a traffic mitigation fee for future traffic improvements in the City. Typically, traffic mitigation improvements are often needed under cumulative traffic conditions rather than with the addition of only one project. This fee can also be imposed on commercial developments in order to upgrade the capacity of the proposed interchanges.

A number of other specific circulation issues are discussed below. The location of these circulation issues are shown in Figure 8. The numbering system of these issues does not indicate their importance.

Circulation Issue No. 1: The alignment of the new southern interchange with U.S. 101 would result in undesirable operating conditions. This alignment creates two critical intersections, Cloverdale Boulevard/Treadway Drive and Cloverdale Boulevard/Southern Interchange Connection, at a distance less than 400 feet apart. A number of mitigation measures should be explored. One alternative would be to realign the Treadway Drive connection with Cloverdale Boulevard farther away from the interchange connection. Another alternative would be to realign the Cloverdale Boulevard/Southern Interchange Connection so that the frontage road segment to the south would become the minor street of a "T" intersection. Under this alternative, the southbound Cloverdale Boulevard to southern interchange movement would be continuous without requiring turning movements.







## CLOVERDALE GENERAL PLAN

CIRCULATION ISSUES



FIGURE  
8



Circulation Issue No. 2: The Foothill Boulevard extension would become a higher speed bypass to Cloverdale Boulevard. It would be appropriate to restrict any residential development from fronting on this new roadway. All development along this corridor should be designed to back-up to the road to avoid any future conflict between traffic needs and the surrounding neighborhood. It should be noted that this extension would most likely carry minor traffic volumes in the future. The majority of development in the City would lie between this extension and U.S. 101. Therefore, any north-south travel on Foothill Boulevard would involve back-tracking from most residential areas to the desired direction of travel.

Circulation Issue No. 3: The South Street and First Street extensions which were included in the previous General Plan should be included in the updated General Plan. These extensions, especially the South Street extension could become important links in the local network. The extension provide the most direct routes from existing residential areas to the central interchange with U.S. 101. Consideration should be given to classifying South Street as an arterial in the updated General Plan.

Circulation Issue No. 4: As described in the "Existing Conditions" section, the southbound Franklin Street approach at Cloverdale Boulevard is aligned in a non-standard manner which requires a merge movement for the southbound Franklin Avenue approach. The City should consider realigning Franklin Avenue to create a standard right angle approach to Cloverdale Boulevard.

Circulation Issue No. 5: Under future traffic conditions, the intersection of Cloverdale Boulevard and the central interchange connection could become the most critical intersection in the City. The majority of existing residential areas in the City would use this interchange to access U.S. 101. Also, the majority of U.S. 101 through traffic which stops in Cloverdale would use the central interchange for access. The intersection with Cloverdale Boulevard as shown in the plan by Caltrans would create very undesirable operating conditions because of the merge alignment which would be created. Because of the projected traffic demand at this location, this intersection should be the highest capacity intersection in the City. In addition, the eastern design variation identified by Caltrans would be more desirable than the preferred plan because it provides more stacking distance between the interchange and Cloverdale Boulevard.

Circulation Issue No. 6: The proposed intersection of First Street and the eastern frontage road could become a critical intersection. As shown in the plan by Caltrans, the proposed alignment may create undesirable sight distances from the frontage road approach. Also, the close proximity to the railroad right-of-way may create operational problems. This intersection should be located farther to the east if possible.

Circulation Issue No. 7: Through traffic travelling from S.R. 128 to U.S. 101 and the reverse should be directed to use the northern interchange. Because the downtown plan would decrease the through traffic carrying capacity of Cloverdale Boulevard, it would be important to restrict any future truck traffic on City streets. Because of the potential increase in left turn traffic from S.R. 128 with the bypass, this location may warrant traffic signals in the future.

## LAND USE ISSUES

Land use and circulation elements can be considered mismatched if the development permitted would overwhelm available and proposed transportation facilities, or if the size, configuration and location of facilities do not correspond to what is needed for efficient circulation access.

Two obvious alternatives are to: 1) modify the land use element to better reflect the carrying capacities of the transportation facilities; or 2) modify the circulation element to provide sufficient transportation capacity without disturbing the residential areas.

The most critical portion of the Cloverdale circulation network which would be impacted by any changes in the land use would be the streets and intersections near the proposed freeway interchanges. The most appropriate land uses near the interchanges include highway commercial and industrial uses. However, commercial uses tend to generate a significant amount of traffic which generally require more capacity than traffic generated by industrial uses. If the City cannot modify the planned lane configurations at the interchanges, the land use element should be designed to accommodate the proposed interchange configurations.

The land use proposed as part of the downtown plan could have an impact on the circulation system. In order to determine the impact, land use details should be known. For instance, if the majority of proposed uses are geared to serve the surrounding community, the plan would have a minor impact on the circulation system. However, if the uses are planned to attract visitors and/or employees from outside of the area, then it may have a significant impact on the circulation system. In fact, any proposed land use which is designed to attract users from outside of Cloverdale would have a significant impact on the circulation system. These type of uses should be limited and located where there is available traffic capacity.



## OTHER TRANSPORTATION ISSUES

### Transit

Bus service along Cloverdale Boulevard is provided by Sonoma County Transit. Route 60 runs between Cloverdale City Hall and the Second Street Transit Mall in Santa Rosa, with intermediate stops in Asti, Geyserville, Healdsburg, Windsor and northern Santa Rosa. Currently, seven buses per weekday run along this route, two during the morning peak period and two during the p.m. peak period. Saturday service is also offered. Adult fares run from \$.80 for local trips to \$2.00 for Cloverdale-Santa Rosa trips.

Sonoma County Transit reported a 25 percent rise in patronage on Route 60 between 1988 and 1989. Over a third of the patrons are students and most patrons use transit to reach destinations in Santa Rosa. Sonoma County Transit plans to introduce Sunday and evening service within the next few years. Express service to Santa Rosa is planned for 1994.

Potential transit improvements include more frequent bus service along Route 60 from Cloverdale south and the extension of service to northern Cloverdale. The present supply of transit service is probably adequate for a community of Cloverdale's size, however, future growth could require new routes to be established to serve new residential areas and future park-and-ride lots in Cloverdale.

Cloverdale Transit offers minibus service to a small number of locations in the city during the peak periods. Demand response runs are made throughout the rest of the day. The system operates between 8:00 a.m. and 5:00 p.m., Mondays through Fridays.

Currently, Sonoma County has expressed interest in purchasing the Northwestern Pacific Railroad right-of-way located just west of the Russian River. This right-of-way could provide a vital link between Cloverdale and other Sonoma County communities. Plans call for either a light rail line or busway to be built along this corridor throughout Sonoma County, depending on the outcome of a countywide measure up for approval in November, 1990.

### Bicycle

Currently, there are few facilities for bicycle traffic in the City of Cloverdale. Vehicular congestion along Highway 101, the most direct route through Cloverdale, severely limits bicycle access. In addition, bicycle safety is a major concern among riders in the area.

Bicycle lanes should be developed on all major arterials in Cloverdale where the right-of-way is available for purchase. A citywide plan for integrating bicycle facilities with regional transit stops should be encouraged, where right-of-way and funding exist. All major new development should contain provisions for safe, secure bicycle parking.

## Pedestrian

Presently, not all streets are equipped with sidewalks for pedestrian traffic. Most sidewalks are either near or along Highway 101, in central Cloverdale. While there are a number of crosswalks in the downtown area, few of them cross Highway 101.

Sidewalks should be constructed on all downtown city streets, particularly those providing access to the downtown area, commercial establishments and transit stops.

It is especially important to plan for pedestrians in new developments. Future planning should not only be concerned with the provision of sidewalks in new areas, but also with encouraging pedestrian trips through creative site design. For example, the integration of neighborhood retail services and schools with residential subdivisions can help minimize the need for motorized trips.

## Para Transit

Para Transit services are personalized, flexible, client-oriented transportation by a variety of means. These services include pre-arranged ride-sharing, demand-responsive transit and ownership/use schemes.

Currently, few para transit alternatives are available to individuals commuting from Cloverdale to other cities. A number of residents commute to employment centers along Highway 101, however, only informal carpooling/vanpooling is known to exist. No commuter message boards nor park and ride lots have been established in Cloverdale.

Ridesharing should be actively promoted in the Cloverdale area. The City should take an active role in publicizing rideshare options for residents commuting to points outside of the immediate vicinity. If an adequate demand for shared rides is found to exist, perhaps a commuter message board could be set up to match up commuters traveling to similar destinations. Rides for Bay Area Commuters, a non-profit agency, can assist individuals and groups interested in forming shared-ride arrangements.

Further growth in and around Cloverdale could eventually justify requesting Caltrans to build a park-n-ride lot at the central and southern interchanges of the new Highway 101 freeway bypass to the east of downtown. Also, future transit could serve park-and-ride lots as it does along Highway 101 in Marin County.

## REFERENCES

*Environmental Impact Statement and Report, Cloverdale Bypass Route 101 in Sonoma County*, FHWA/Caltrans, December 1989.

*Traffic Impact Analysis Rancho De Amigos Development Plan*, Alan G. Tilton, July 1988.

*Master Environmental Assessment for the M.P. Rosen Property*, WESCO, April 1990.

*Draft EIR for Cloverdale Redevelopment Project*, April 1987.

*Final EIR - Stonehenge and Rancho de Amigos Properties*, LSA, October 1981.

*Ridgeview Heights II Annexation EIR*, Goodrich Traffic Group, July 1990.

*City of Cloverdale General Plan*, 1978.



## APPENDIX A

### DESCRIPTION OF INTERSECTION CAPACITY ANALYSIS





## DESCRIPTION OF INTERSECTION CAPACITY ANALYSIS

TJKM utilizes a method of intersection capacity analysis known as the Intersection Capacity Utilization (ICU) method. A variation (and derivation) of the TJKM method, known as the critical movement analysis, is described in *Interim Materials on Highway Capacity*, Transportation Research Circular 212, January 1980, published by the Transportation Research Board of the National Academy of Sciences. The TJKM method is similar to the Planning Applications method of Signalized Intersection Analysis described in Circular 212.

The method sums the volume-to-capacity (V/C) ratio of each governing (or critical) signal phase at an intersection to produce an overall intersection volume-to-capacity ratio. When the ratio of volume to capacity reaches unity (1.00), the intersection is "at capacity" and is described as operating at Level of Service E and approaching Level of Service F conditions. See the table "Summary of Levels of Service for Intersections" for the relationship between the level of service rating and volume-to-capacity ratio.

A sample calculation is shown on the accompanying computer print-out "TJKM Intersection Capacity Analysis." This example describes a hypothetical intersection of A Street and B Street, which is regulated by three phase traffic signals. The first phase is for southbound traffic only and contains three lanes. Right turn movements in the right lane (189 vehicles) have a smaller per lane volume than in the two remaining lanes (226 vehicles). Therefore, the length of the signal phase is governed by the traffic in the two left lanes. The capacity of Phase 1 is 2,700 vehicles per hour of green, the volume is 452 vehicles and the resulting volume-to-capacity ratio is 0.1674. Phase 2, for the northbound movements, has two lanes and a volume-to-capacity ratio of 0.1877. For Phase 3, the westbound through plus right traffic cannot proceed through the intersection at the same time as the eastbound left turn movement, even though they are on the same signal phase. Practically, the left turning vehicles and opposing through traffic alternate as gaps in traffic allow. The total Phase 3 capacity requirement is the sum of the westbound through and right combined, 0.2187, and the eastbound left, 0.0900. The critical movement V/C ratios are summed, then rounded to two decimal places. An allowance for yellow time (assumed to be lost time for vehicle movement) is added to obtain the overall intersection volume-to-capacity rating. In the example, the intersection rating of 0.76 equates to a Level of Service C designation.

The advantages of this type of capacity calculation is its direct relationship to actual intersection operations and the ease with which changes in volume or capacity (or both) can be analyzed. In addition, the level of accuracy of this method is comparable to that of the traffic projection process used to determine future traffic volumes.



The number of lanes and the use of the lanes is denoted with a special nomenclature described below:

### Lane Nomenclature

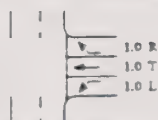
X,Y    Where    X    Denotes the number of lanes available for a particular movement.

Y    Denotes how the lanes are used.

When Y is --

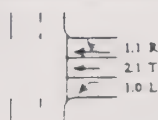
-- The following applies:

0



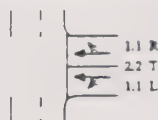
A lane used exclusively for a particular movement (i.e. exclusive left-turn lane).

1



A lane which is shared, that is, either of two different movements can be made from a particular lane (i.e. a lane which is shared by through and right-turn traffic).

2

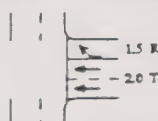


Denotes two or more through lanes in which two lanes are shared, one with left-turn traffic, the other with right-turn traffic.

3

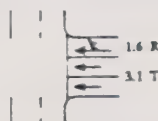
Denotes an expressway through movement.

5



Denotes a right-turn movement from an exclusive right-turn lane with right-turn arrow and U-turn prohibition on the conflicting left-turn movement.

6



Denotes a right-turn movement from a shared lane with a right-turn arrow and U-turn prohibition on the conflicting left-turn movement.

7,8,9

Denotes a turning movement which has an additional lane to turn into, as shown below:

7



Turn lane which is shared and under signal control, and which has its own lane to turn into.

8



Exclusive turn lane which is under signal control, and which has its own lane to turn into.

9



Exclusive turn lane not under signal control, often referred to as a "free" turn. Since the volumes in this lane do not conflict with other intersection movements, the V/C ratio of the free right-turn movement is not included in the sum of critical V/C ratios.



**TJKM YELLOW TIME ADJUSTMENT  
FOR CALCULATING V/C RATIOS  
FOR V/C CALCULATIONS**

<u>Green Time</u>	<u>Add Yellow (Lost) Time</u>	<u>Total</u>				
0.71	0.10	0.81				
0.72	0.10	0.82				
0.73	0.10	0.83				
0.74	0.10	0.84				
0.75	0.09	0.84				
0.76	0.09	0.85	0.00	-	0.60	A
0.77	0.08	0.85	0.61	-	0.70	B
0.78	0.08	0.86	0.71	-	0.80	C
0.79	0.07	0.86	0.81	-	0.90	D
0.80	0.07	0.87	0.91	-	1.00	E
0.81	0.06	0.87	1.00+			F
0.82	0.06	0.88				
0.83	0.05	0.88				
0.84	0.05	0.89				
0.85	0.04	0.89				
0.86	0.04	0.90				
0.87	0.03	0.90				
0.88	0.03	0.91				
0.89	0.02	0.91				
0.90	0.02	0.92				
0.91	0.01	0.92				
0.92	0.01	0.93				
0.93	0.00	0.93				

V/C = Volume-to-Capacity Ratio  
LOS = Level of Service

The assumed capacities of the most common types of lanes are described below:

**Lane Capacities**

<u>Designation</u>	<u>Through Capacity</u>	<u>Turn Capacity</u>
1.0	1,650	1,500
1.1	1,500	1,500
2.0	3,300	2,700 (80%
2.1	3,150	2,700 of 2nd
2.2	3,000	- lane)
3.0	4,950	3,900 (80%
3.1	4,800	3,900 each of
3.3	5,550	- 2nd & 3rd
		lane)
4.0	6,600	-
4.1	6,450	-



## SUMMARY OF LEVELS OF SERVICE FOR INTERSECTIONS

<u>Level of Service</u>	<u>Type of Flow</u>	<u>Delay</u>	<u>Maneuverability</u>	<u>V/C Ratio<sup>1</sup></u>
A	Stable Flow	Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.	Turning movements are easily made, and nearly all drivers find freedom of operation.	0.00-0.60
B	Stable Flow	Slight delay. If signalized, an occasional approach phase is fully utilized.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles.	0.61-0.70
C	Stable Flow	Acceptable delay. If signalized, a few drivers arriving at the end of a queue may occasionally have to wait through one signal cycle.	Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71-0.80
D	Approaching Unstable Flow	Tolerable delay. Delays may be substantial during short periods, but excessive back-ups do not occur.	Maneuverability is severely limited during short periods due to temporary back-ups.	0.81-0.90
E	Unstable Flow	Intolerable delay. Delay may be great-up to several signal cycles.	There are typically long queues of vehicles waiting upstream of the intersection.	0.91-1.00
F	Forced Flow	Excessive delay.	Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	Varies <sup>1</sup>

<sup>1</sup> In general, volume-to-capacity ratios cannot be greater than 1.00, unless the lane capacity assumptions are too low. Also, if future demand projections are considered for analytical purposes, a ratio greater than 1.00 might be obtained, indicating that the projected demand would exceed the capacity.

References:    - *Highway Capacity Manual*, Special Report No. 209, Transportation Research Board, 1985.  
                      - *Highway Capacity Manual*, Special Report No. 87, Highway Research Board, 1965.  
                      - TJKM



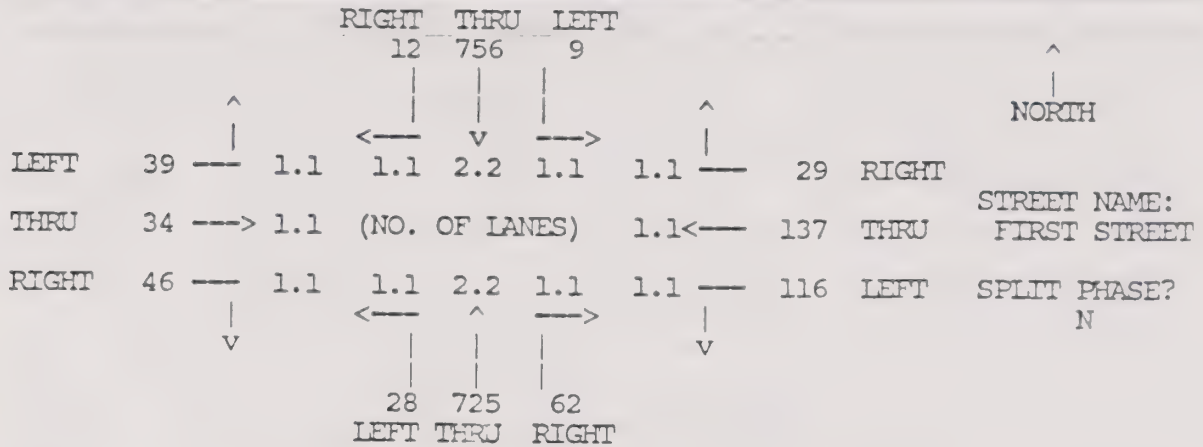
**APPENDIX B**  
**RESULTS OF THE INTERSECTION CAPACITY ANALYSIS**



# TJCM INTERSECTION CAPACITY ANALYSIS

12/11/90

INTERSECTION 1 CLOVERDALE BL and FIRST STREET CLOVERDALE  
COUNT DATE/TIME: 11/6/90 4:00-6:00 PM PEAK HOUR: 4:00-5:00 PM  
CONDITION : P.M. PEAK HOUR - EXISTING FILE 222-001.



STREET NAME: CLOVERDALE BL

SPLIT PHASE? N

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB RIGHT (R)	62	62	1500	0.0413	
THRU (T)	725	725	2250	0.3222	
LEFT (L)	28	28	1500	0.0187	
T + R		787	2250	0.3498	
T + L		753	2250	0.3347	
T + R + L		815	2250	0.3622	0.3622
SB RIGHT (R)	12	12	1500	0.0080	
THRU (T)	756	756	2250	0.3360	
LEFT (L)	9	9	1500	0.0060	0.0060
T + R		768	2250	0.3413	
T + L		765	2250	0.3400	
T + R + L		777	2250	0.3453	
EB RIGHT (R)	46	46	1500	0.0307	
THRU (T)	34	34	1500	0.0227	
LEFT (L)	39	39	1500	0.0260	0.0260
T + R		80	1500	0.0533	
T + L		73	1500	0.0487	
T + R + L		119	1500	0.0793	
WB RIGHT (R)	29	29	1500	0.0193	
THRU (T)	137	137	1500	0.0913	
LEFT (L)	116	116	1500	0.0773	
T + R		166	1500	0.1107	
T + L		253	1500	0.1687	
T + R + L		282	1500	0.1880	0.1880

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION:  
ADJUSTMENT FOR LOST YELLOW TIME:

0.58  
0.10

TOTAL VOLUME-TO-CAPACITY RATIO:  
INTERSECTION LEVEL OF SERVICE:

0.68  
B

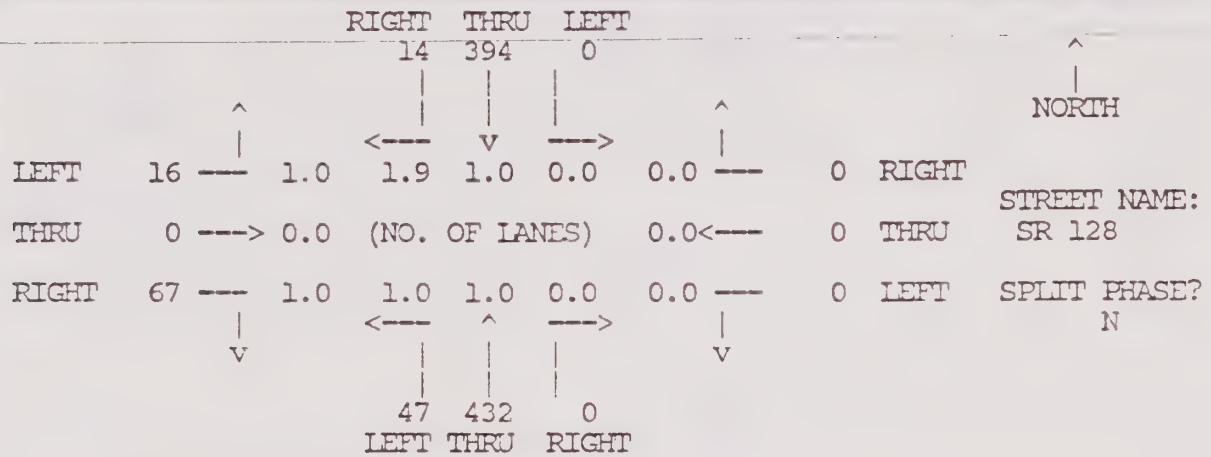
\* ADJUSTED FOR RIGHT TURN ON RED



# TJKM INTERSECTION CAPACITY ANALYSIS

12/11/90

INTERSECTION 2 US 101 and SR 128 CLOVERDALE  
COUNT DATE/TIME: 11/6/90 4:00-6:00 PM PEAK HOUR: 4:00-5:00 PM  
CONDITION : P.M. PEAK HOUR - EXISTING FILE 222-001.



STREET NAME: US 101

SPLIT PHASE? N

MOVEMENT	ORIGINAL VOLUME	ADJUSTED VOLUME*	CAPACITY	V/C RATIO	CRITICAL V/C
NB THRU (T)	432	432	1650	0.2618	
LEFT (L)	47	47	1500	0.0313	0.0313
SB RIGHT (R)	14	14	1650	0.0085	
THRU (T)	394	394	1650	0.2388	0.2388
EB RIGHT (R)	67	0 *	1500	0.0000	
LEFT (L)	16	16	1500	0.0107	0.0107

VOLUME-TO-CAPACITY RATIO FOR THE INTERSECTION: 0.28  
ADJUSTMENT FOR LOST YELLOW TIME: 0.10

TOTAL VOLUME-TO-CAPACITY RATIO: 0.38  
INTERSECTION LEVEL OF SERVICE: A

\* ADJUSTED FOR RIGHT TURN ON RED

Developed by TJKM Transportation Consultants, Pleasanton, CA, 1989 NN

\*\*\*\*\*  
IDENTIFYING INFORMATION  
-----

AVERAGE RUNNING SPEED, MAJOR STREET..... 45  
PEAK HOUR FACTOR..... 1  
AREA POPULATION..... 10000  
NAME OF THE EAST/WEST STREET..... SR 128  
NAME OF THE NORTH/SOUTH STREET..... US 101  
NAME OF THE ANALYST..... GJW  
DATE OF THE ANALYSIS (mm/dd/yy)..... 12/12/00  
TIME PERIOD ANALYZED..... P.M. PEAK HOUR  
OTHER INFORMATION: EXISTING

INTERSECTION TYPE AND CONTROL  
-----

INTERSECTION TYPE: T-INTERSECTION  
MAJOR STREET DIRECTION: NORTH/SOUTH  
CONTROL TYPE EASTBOUND: STOP SIGN

TRAFFIC VOLUMES  
-----

	EB	WB	NB	SB
LEFT	16	--	47	0
THRU	0	--	432	394
RIGHT	67	--	0	14

NUMBER OF LANES  
-----

	EB	WB	NB	SB
LANES	2	--	2	2

## ADJUSTMENT FACTORS

Page-

	PERCENT GRADE	RIGHT TURN ANGLE	CURB RADIUS (ft) FOR RIGHT TURNS	ACCELERATION LANE FOR RIGHT TURNS
EASTBOUND	0.00	90	20	N
WESTBOUND	-----	---	---	-
NORTHBOUND	0.00	90	20	N
SOUTHBOUND	0.00	90	20	N

## VEHICLE COMPOSITION

	% BU TRUCKS AND RV'S	% COMBINATION VEHICLES	% MOTORCYCLES
EASTBOUND	0	0	0
WESTBOUND	---	---	---
NORTHBOUND	0	0	0
SOUTHBOUND	0	0	0

## CRITICAL GAPS

	TABULAR VALUES (Table 10-2)	ADJUSTED VALUE	SIGHT DIST. ADJUSTMENT	FINAL CRITICAL GAP
MINOR RIGHTS				
EB	6.10	6.10	0.00	6.10
MAJOR LEFTS				
NE	5.80	5.80	0.00	5.80
MINOR LEFTS				
EB	7.90	7.90	0.00	7.90

## CAPACITY AND LEVEL-OF-SERVICE

Page-3

MOVEMENT	FLOW- RATE v (pcph)	POTEN- TIAL CAPACITY c (pcph) P	ACTUAL MOVEMENT CAPACITY c (pcph) M	SHARED CAPACITY c (pcph) SH	RESERVE CAPACITY c = c - v P SH	LOS
MINOR STREET						
EB LEFT	18	177	168	168	150	D
RIGHT	74	792	792	792	710	A
MAJOR STREET						
NB LEFT	52	614	614	614	560	A





APPENDIX H  
NOISE ANALYSIS



# Noise Element of the General Plan for the City of Cloverdale (Existing Setting Only)

Report # 90-242.A  
February 28, 1991

Prepared by:

Fred Greve, P.E.  
Mike Holritz

**MESTRE GREVE ASSOCIATES**  
280 Newport Center Drive  
Suite 230  
Newport Beach, California 92660-7528  
(714) 760-0891

## CITY OF CLOVERDALE NOISE ELEMENT

### 1.0 INTRODUCTION

#### 1.1 OVERVIEW

##### 1.1.1 Contents of Element

This Noise Element follows the recently revised State guidelines in the State Government code Section 653021(g) and Section 46050.1 of the Health and Safety Code. The Noise Element quantifies the community noise environment in terms of noise exposure contours for both near-term and long-term levels of growth and traffic activity. The information will become a guideline for the development of land use policies to achieve compatible land uses and provide baseline levels and noise source identification for local noise ordinance enforcement.

##### 1.1.2 Key Issues

*1. Transportation Noise Control* - Within the City of Cloverdale are a number of transportation related noise sources including major arterials, collector roadways, a general aviation airport, and a railroad. These sources are the major contributors of noise in Cloverdale. Cost effective strategies to reduce their influence on the community noise environment are an essential part of the Noise Element.

*2. Community Noise Control for Non-Transportation Noise Sources* - Residential land uses and areas identified as noise sensitive must be protected from excessive noise from non-transportation sources including commercial and construction activities. These impacts are most effectively controlled through the adoption and application of a City Noise Ordinance.

*3. Noise and Land Use Planning Integration* - Information relative to the existing and future noise environment within Cloverdale City should be integrated into future land use planning decisions. The Element presents the noise environment in order that the City may include noise impact considerations in development programs. Noise and land use compatibility guidelines are presented, as well as noise standards for new developments.

#### 1.2 PURPOSE

The Noise Element of a General Plan is a comprehensive program for including noise control in the planning process. It is a tool for local planners to use in achieving and maintaining compatible land use with environmental noise levels. The Noise Element identifies noise sensitive land uses and noise sources, and defines areas of noise impact for the purpose of developing programs to ensure that City of Cloverdale residents will be protected from excessive noise intrusion.

### 1.3 AUTHORIZATION

The State of California has mandated that each county and city prepare a Noise Element as part of its General Plan. Section 65302(g) of the California Government Code requires specifically:

*"(g) A Noise Element shall identify and appraise noise problems in the community. The noise element shall recognize the guidelines established by the Office of Noise Control in the State Department of Health Services and shall analyze and quantify, to the extent practicable, as determined by the legislative body, current and projected noise levels for all of the following sources:*

*Highways and freeways.*

*Primary arterials and major local streets.*

*Passenger and freight on-line railroad operations and ground rapid transit systems.*

*Commercial, general aviation, heliport, helistop, and military airport operations, aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operation.*

*Local industrial plants, including, but not limited to, railroad classification yards.*

*Other ground stationary noise sources identified by local agencies as contributing to the community noise environment.*

*Noise contours shall be shown for all of the sources and stated in terms of community noise equivalent level (CNEL) or day-night average level (LDN). The noise contours shall be prepared on the basis of noise monitoring or following generally accepted noise modeling techniques for the various sources identified in paragraphs (1) to (6), inclusive. The noise contours shall be used as a guide for establishing a pattern of land uses in the land use element that minimizes the exposure of community residents to excessive noise. The Noise Element shall include implementation measures and possible solutions that address existing and foreseeable noise problems, if any. The adopted noise element shall serve as a guideline for compliance with the state's noise insulation standards."*

The State Guidelines for Preparation and Content of Noise Elements of the General Plan indicate that the Noise Element should present the noise environment in terms of noise contours. For those areas identified as containing noise sensitive facilities, the noise environment is determined by monitoring.



## 2.0 EXISTING CONDITIONS/ISSUE ANALYSIS

### 2.1 DEFINITION OF NOISE

*1. Noise Definitions* Sound is technically described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the Decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dB higher than another is judged to be twice as loud; and 20 dB higher four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in Exhibit 1.

Noise has been defined as unwanted sound and it is known to have several adverse effects on people. From these known effects of noise, criteria have been established to help protect the public health and safety and prevent disruption of certain human activities. These criteria are based on such known impacts of noise on people as hearing loss, speech interference, sleep interference, physiological responses and annoyance. Each of these potential noise impacts on people are briefly discussed in the following narratives:

**HEARING LOSS** is not a concern in community noise problems of this type. The potential for noise induced hearing loss is more commonly associated with occupational noise exposures in heavy industry or very noisy work environments. Noise levels in neighborhoods, even in very noisy airport environs, are not sufficiently loud to cause hearing loss.

**SPEECH INTERFERENCE** is one of the primary concerns in environmental noise problems. Normal conversational speech is in the range of 60 to 65 dBA, and any noise in this range or louder may interfere with speech. There are specific methods of describing speech interference as a function of distance between speaker and listener and voice level. Exhibit 2 shows the relationship between noise levels and speech interference.

**SLEEP INTERFERENCE** is a major noise concern because sleep is the most noise sensitive human activity. Sleep disturbance studies have identified interior noise levels that have the potential to cause sleep disturbance. Note that sleep disturbance does not necessarily mean awakening from sleep, but can refer to altering the pattern and stages of sleep.

**PHYSIOLOGICAL RESPONSES** are those measurable effects of noise on people which are realized as changes in pulse rate, blood pressure, etc. While such effects can be induced and observed, the extent is not known to which these physiological responses cause harm or are signs of harm.

**ANNOYANCE** is the most difficult of all noise responses to describe. Annoyance is a very individual characteristic and can vary widely from person to person. What one person considers tolerable can be quite unbearable to another of equal hearing capability.

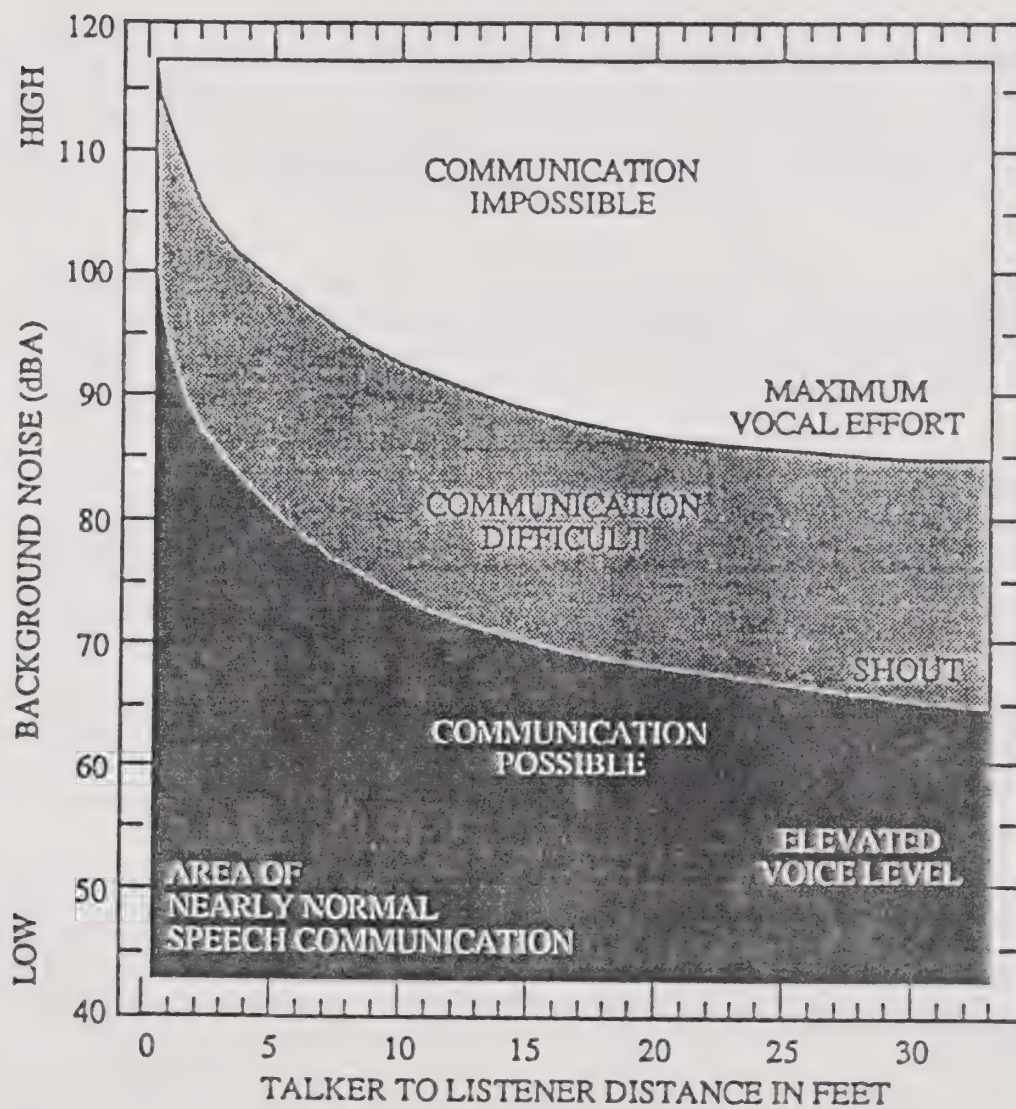
**SOUND LEVELS AND LOUDNESS OF ILLUSTRATIVE NOISES IN INDOOR AND OUTDOOR ENVIRONMENTS**  
(A-Scale Weighted Sound Levels)

dB(A)	OVER-ALL LEVEL Sound Pressure Level Approx. 0.0002 Microbar	COMMUNITY (Outdoor)	HOME OR INDUSTRY	LOUDNESS Human Judgement of Different Sound Levels
130	UNCOMFORTABLY	Military Jet Aircraft Take-Off With After-burner From Aircraft Carrier @ 50 Ft. (130)	Oxygen Torch (121)	120 dB(A) 32 Times as Loud
120 110	LOUD	Turbo-Fan Aircraft @ Take Off Power @ 200 Ft. (90)	Riveting Machine (110) Rock-N-Roll Band (106-114)	110 dB(A) 16 Times as Loud
100	VERY	Jet Flyover @ 1000 Ft. (103) Boeing 707, DC-8 @ 6080 Ft. Before Landing (106) Bell J-2A Helicopter @ 100 Ft. (100)		100 dB(A) 8 Times as Loud
90	LOUD	Power Mower (96) Boeing 737, DC-9 @ 6080 Ft. Before Landing (97) Motorcycle @ 25 Ft. (90)	Newspaper Press (97)	90 dB(A) 4 Times as Loud
80		Car Wash @ 20 Ft. (89) Prop. Airplane Flyover @ 1000 Ft. (88) Diesel Truck, 40 MPH @ 50 Ft. (84) Diesel Train, 45 MPH @ 100 Ft. (83)	Food Blender (88) Milling Machine (85) Garbage Disposal (80)	80 dB(A) 2 Times as Loud
70	MODERATELY LOUD	High Urban Ambient Sound (80) Passenger Car, 65 MPH @ 25 Ft. (77) Freeway @ 50 Ft. From Pavement Edge, 10:00 AM (76 + or - 6)	Living Room Music (76) TV-Audio, Vacuum Cleaner	70 dB(A)
60		Air Conditioning Unit @ 100 Ft. (60)	Cash Register @ 10 Ft. (65-70) Electric Typewriter @ 10 Ft. (64) Dishwasher (Rinse) @ 10 Ft. (60) Conversation (60)	60 dB(A) 1/2 as Loud
50	QUIET	Large Transformers @ 100 Ft. (50)		50 dB(A) 1/4 as Loud
40		Bird Calls (44) Lower Limit Urban Ambient Sound (40)		40 dB(A) 1/8 as Loud
	JUST AUDIBLE	(dB(A) Scale Interrupted)		
10	THRESHOLD OF HEARING			

SOURCE: Reproduced from Melville C. Branch and R. Dale Beland, Outdoor Noise in the Metropolitan Environment,  
Published by the City of Los Angeles, 1970, p.2.







*Exhibit 2*  
*Effects of Noise on Speech Interference*





### 2.2.1 Standards

Community noise is generally not steady state and varies with time. Under conditions of fluctuating noise levels, some type of statistical metric is necessary in order to quantify noise exposure over a long period of time. Several rating scales have been developed for describing the effects of noise on people. They are designed to account for the above known effects of noise on people.

Based on these effects, the observation has been made that the potential for noise to impact people is dependent on the total acoustical energy content of the noise. A number of noise scales have been developed to account for this observation. These scales are the Equivalent Noise Level (LEQ), the Day Night Noise Level (LDN), and the Community Noise Equivalent Level (CNEL). These scales are described in the following paragraphs.

LEQ is the sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over a given sample period. LEQ is the "energy" average noise level during the time period of the sample. LEQ can be measured for any time period, but is typically measured for 15 minutes, 1 hour or 24 hours.

LDN is a 24-hour, time-weighted annual average noise level. Time-weighted refers to the fact that noise which occurs during certain sensitive time periods is penalized for occurring at these times. In the LDN scale, those events that take place during the night (10 pm to 7 am) are penalized by 10 dB. This penalty was selected to attempt to account for increased human sensitivity to noise during the quieter period of a day, where sleep is the most probable activity.

CNEL is similar to the LDN scale except that it includes an additional 5 dB penalty for events that occur during the evening (7pm to 10pm) time period. Either LDN or CNEL may be used to identify community noise impacts within the Noise Element. Examples of CNEL noise levels are presented in Exhibit 3.

The public reaction to different noise levels varies from community to community. Extensive research has been conducted on human responses to exposure of different levels of noise. Exhibit 4 relates LDN noise levels (approximately equal to CNEL noise levels) to community response from some of these surveys. Community noise standards are derived from tradeoffs between community response surveys, such as this, and economic considerations for achieving these levels.

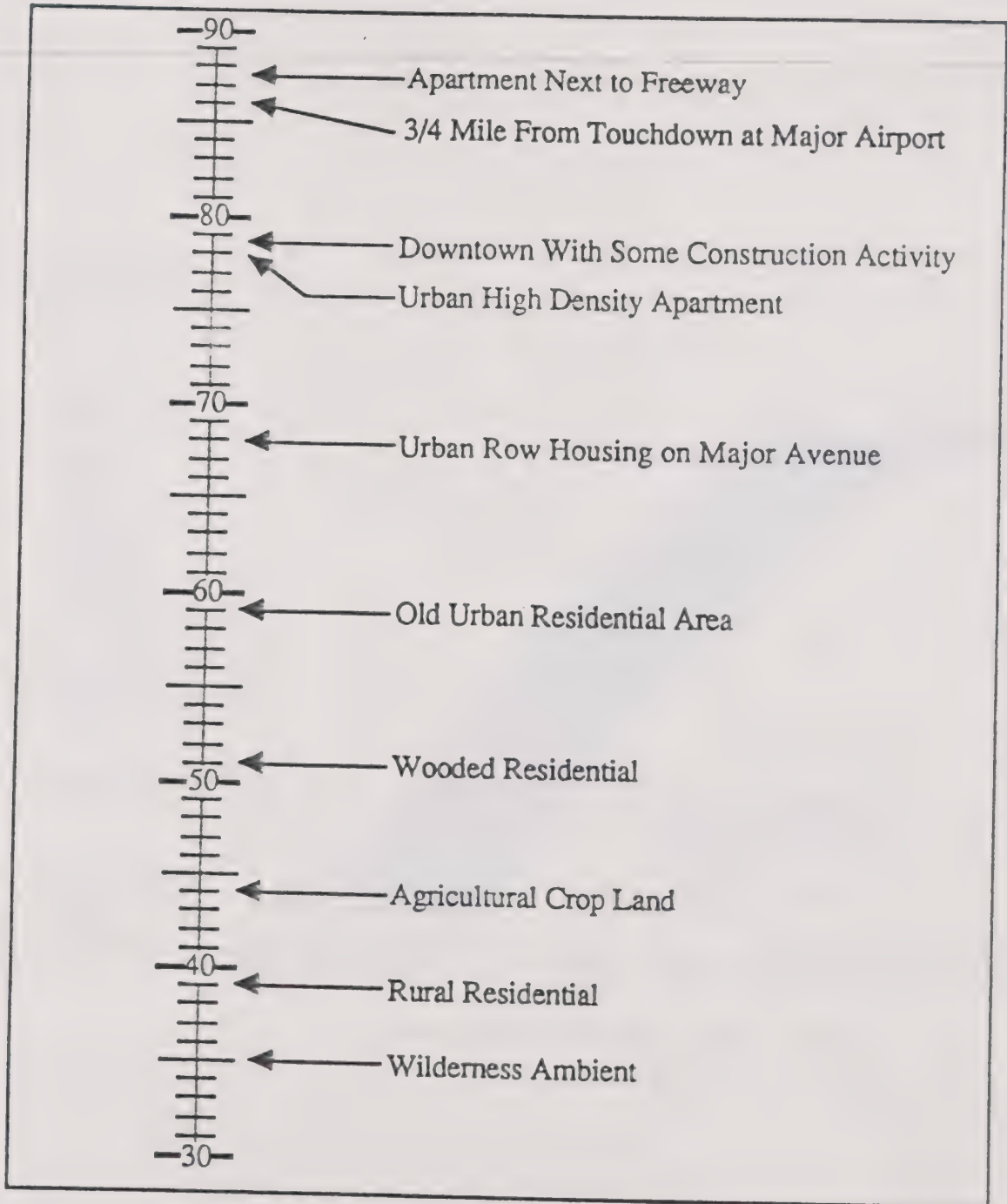
Intermittent or occasional noise such as those associated with stationary noise sources is not of sufficient volume to exceed community noise standards that are based on a time averaged scale such as the LDN scale. To account for intermittent noise, another method to characterize noise is the Percent Noise Level (L%). The Percent Noise Level is the level exceeded X% of the time during the measurement period. Examples of various noise environments in terms of the Percent Noise Levels are shown in Exhibit 5.

Noise Ordinances are typically specified in terms of the percent noise levels. Ordinances are designed to protect people from non-transportation related noise sources such as music, machinery and vehicular traffic on private property. Noise Ordinances do not apply to motor vehicle noise on public streets or other transportation related noise sources that are preempted by the State or Federal government.



CNEL

Outdoor Location





## COMMUNITY REACTION

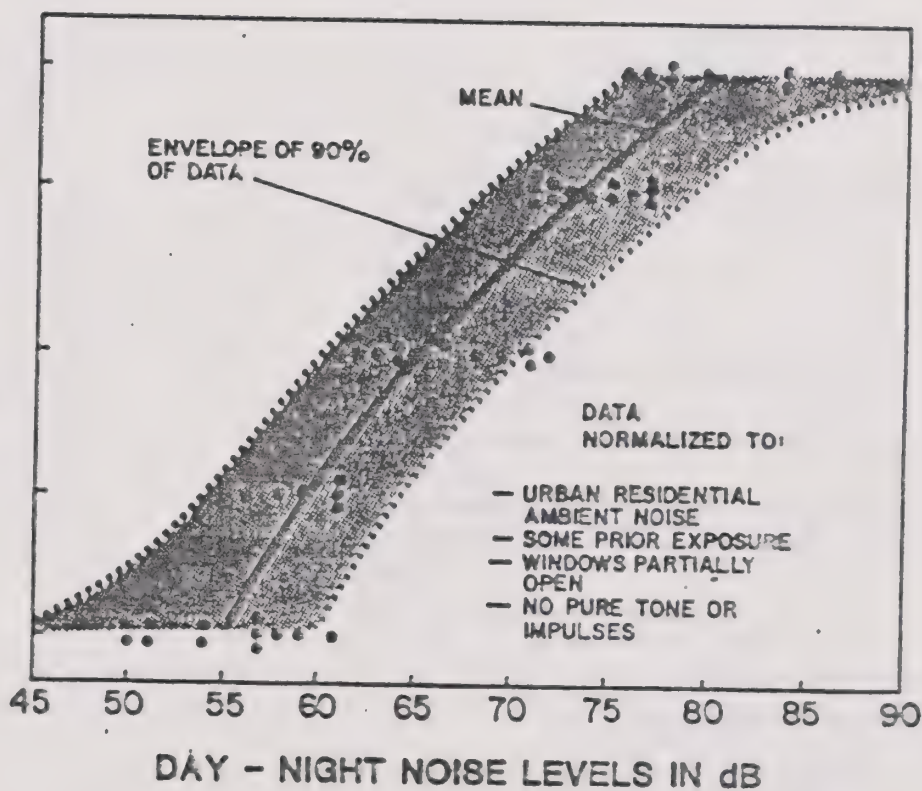
VIGOROUS  
COMMUNITY  
ACTION

SEVERAL  
THREATS  
OF LEGAL  
ACTION, OR  
STRONG  
APPEALS  
TO LOCAL  
OFFICIALS TO  
STOP NOISE

WIDESPREAD  
COMPLAINTS  
OR SINGLE  
THREAT OF  
LEGAL ACTION

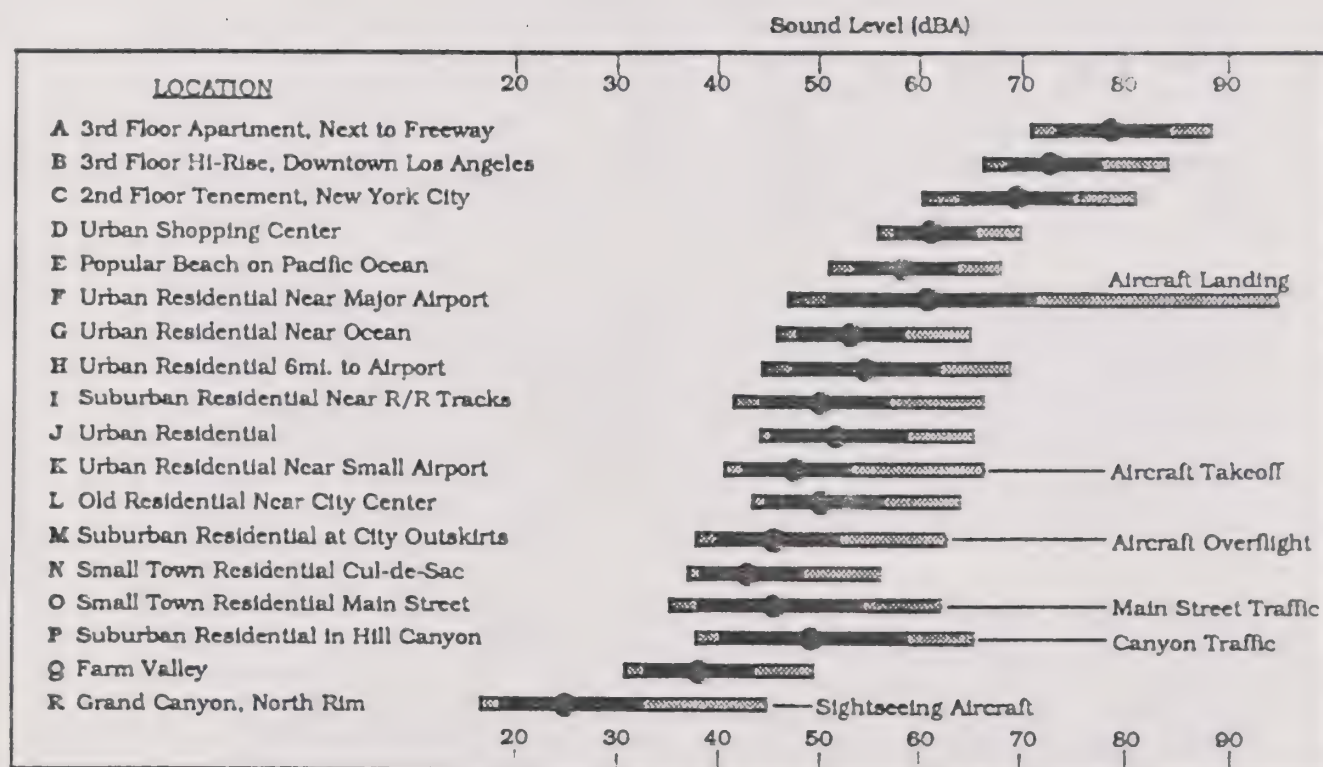
SPORADIC  
COMPLAINTS

NO REACTION,  
ALTHOUGH  
NOISE IS  
GENERALLY  
NOTICEABLE

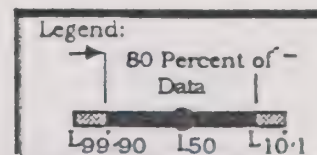








SOURCE: Community Noise, EPA, 1971





*Noise/Land Use Compatibility Guidelines* The purpose of this section is to present information regarding the compatibility of various land uses with environmental noise. It is from these guidelines and standards, that the City of Cloverdale Noise Criteria and Standards have been developed. Noise/Land use guidelines have been produced by a number of Federal and State agencies including the Federal Highway Administration, the Environmental Protection Agency, the Department of Housing and Urban Development, the American National Standards Institute, and the State of California. These guidelines, presented in the following paragraphs, are all based upon cumulative noise criteria such as LEQ, LDN or CNEL.

The ENVIRONMENTAL PROTECTION AGENCY published in March 1974 a very important document entitled "Information on Level of Environmental Noise Requisite to Protect Public Health and Welfare With an Adequate Margin of Safety" (EPA 550/9-74-004). Exhibit 6 presents a table of land uses and requisite noise levels. In this table, 55 LDN is described as the requisite level with an adequate margin of safety for areas with outdoor uses, this includes residences, and recreational areas. The EPA "levels document" does not constitute a standard, specification, or regulation, but identifies safe levels of environmental noise exposure without consideration for economic cost for achieving these levels.

The FEDERAL HIGHWAY ADMINISTRATION (FHWA) has adopted and published noise abatement criteria for highway construction projects. The noise abatement criteria specified by the FHWA are presented in Exhibit 7 in terms of the maximum one hour Noise Equivalent Level (LEQ). The FHWA noise abatement criteria basically establishes an exterior noise goal for residential land uses of 67 LEQ and an interior goal for residences of 52 LEQ. The noise abatement criteria applies to private yard areas and assumes that typical wood frame homes with windows open provide 10 dB noise reduction (outdoor to indoor) and 20 dB noise reduction with windows closed.

The STATE OF CALIFORNIA requires each City and County to adopt Noise Elements of their General Plans. Such Noise Elements must contain a Noise/Land Use compatibility matrix. A recommended (but not mandatory) matrix is presented in the "Guidelines for the Preparation and Content of Noise Elements of the General Plan," (Office of Noise Control, California Department of Health, February 1976). Exhibit 8 presents this recommended matrix.

The CITY OF CLOVERDALE Noise Element of the General Plan contains recommended exterior noise levels for various types of land uses. Recognition of the adopted community noise levels implies that acoustical analysis may be required in areas where the standard is or may be exceeded, and that structural modifications for new development (more insulation, building orientation, etc.) may be necessary. The noise levels are presented as guidelines (as shown in Table 1) to be used to determine which proposed developments may require noise mitigation measures. The City recommends that interior sound levels not exceed 45 dB for residential structures. The City does not have any indoor noise standards for other building uses.





	Measure	Indoor Activity Interference	Hearing Loss Consideration	To Protect Against Both Effects (b)	Outdoor Activity Interference	Hearing Loss Consideration	To Protect Against Both Effects (b)
Residential with Outside Space and Farm Residences	Ldn Leq(24)	45 70		45	55 70		55
Residential with No Outside Space	Ldn Leq(24)	45 70		45			
Commercial	Leq(24)	(a)	70	70(c)	(a)	70	70(c)
Inside Transportation	Leq(24)	(a)	70	(a)			
Industrial	Leq(24)(d)	(a)	70	70(c)	(a)	70	70(c)
Hospitals	Ldn Leq(24)	45 70		45	55 70		55
Educational	Ldn Leq(24)	45 70		45	55 70		55
Recreational Areas	Leq(24)	(a)	70	70(c)	(a)	70	70(c)
Farm Land and General Unpopulated Land	Leq(24)				(a)	70	70(c)

**Code:**

- Since different types of activities appear to be associated with different levels, identification of a maximum level for activity interference may be difficult except in those circumstances where speech communication is a critical activity.
- Based on lowest level.
- Based only on hearing loss.
- An Leq(8) of 75 dB may be identified in these situations so long as the exposure over the remaining 16 hours p day is low enough to result in a negligible contribution to the 24-hour average, i.e., no greater than an Leq of 6 dB.

Note: Explanation of identified level for hearing loss: The exposure period which results in hearing loss at the identified level is a period of 40 years.

\* Refers to energy rather than arithmetic averages.

**SOURCE : EPA**



ACTIVITY CATEGORY	DESIGN NOISE LEVEL - LEQ	DESCRIPTION OF ACTIVITY CATEGORY
A	57 (Exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of open spaces, or historic districts which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas and parks which are not included in category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Category A or B above.
D	-	For requirements of undeveloped lands see FHWA PPM 773.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.



Land Use Category	Community Noise Exposure Ldn or CNEL, dB					
	55	60	65	70	75	80
Residential - Low Density Single Family, Duplex, Mobile Homes						
Residential - Multiple Family						
Transient Lodging - Motels, Hotels						
Schools, Libraries, Churches Hospitals, Nursing Homes						
Auditoriums, Concert Halls, Amphitheatres						
Sports Arenas, Outdoor Spectator Sports						
Playgrounds, Neighborhood Parks						
Golf Courses, Riding Stables Water Recreation, Cemeteries						
Office Buildings, Business Commercial and Residential						
Industrial, Manufacturing Utilities Agriculture						

#### Interpretation

##### Normally Acceptable

Specified Land Use is Satisfactory, Based Upon the Assumption that Any Buildings Involved are of Normal Conventional Construction, Without Any Special Noise Insulation Requirements.

##### Conditionally Acceptable

New Construction or Development Should be Undertaken Only After a Detailed Analysis of the Noise Reduction Requirement is Made and Needed Noise Insulation Features Included in the Design. Conventional Construction, but with Closed Windows and Fresh Air Supply Systems or Air Conditioning, Will Normally Suffice.

##### Normally Unacceptable

New Construction or Development Should Generally be Discouraged. If New Construction or Development Does Proceed, a Detailed Analysis of the Noise Reduction Requirements Must be Made and Needed Noise Insulation Features Included in the Design.

##### Clearly Unacceptable

New Construction or Development Should Generally not be Undertaken.





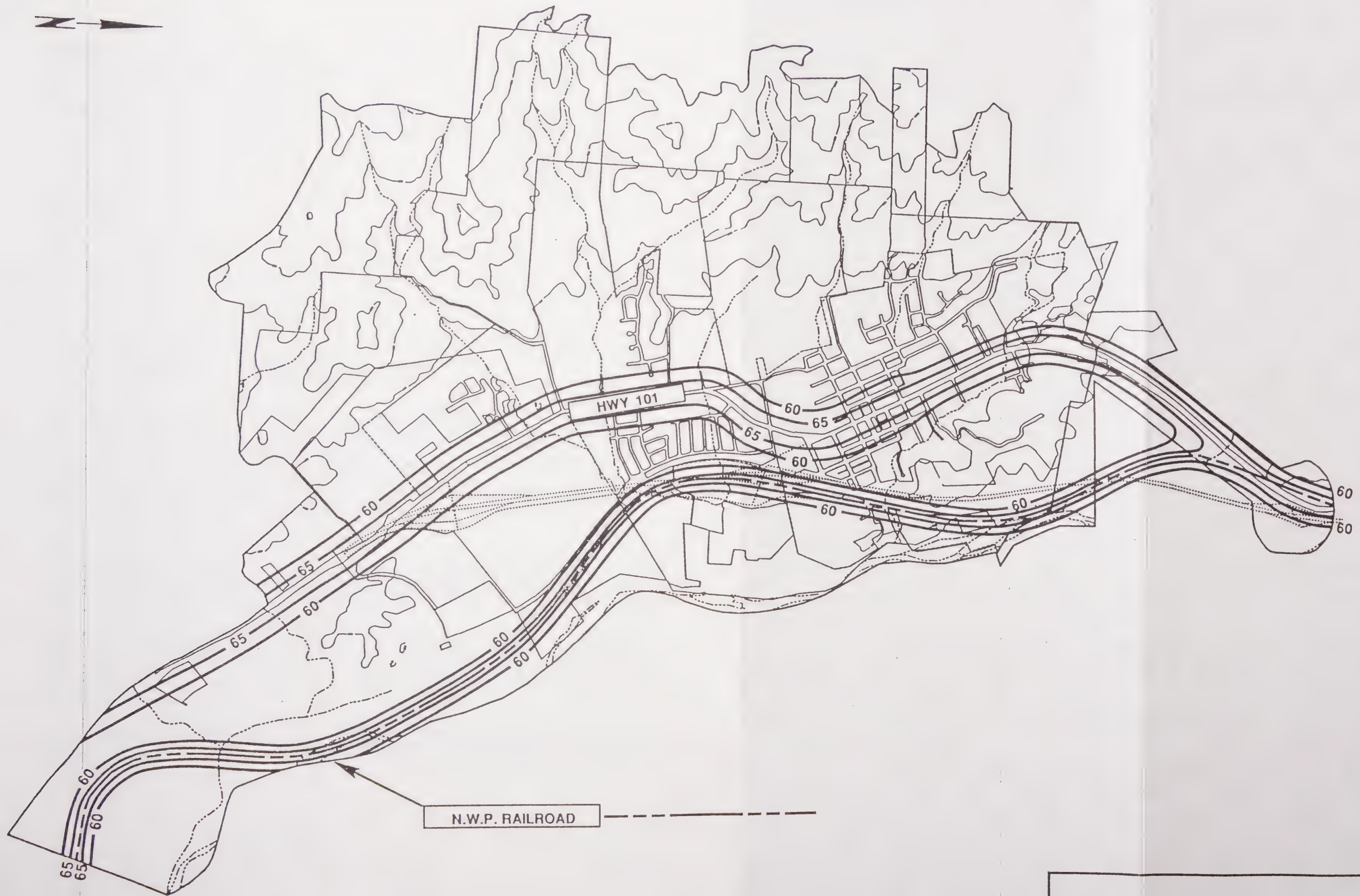






Table 1  
PERMISSIBLE EXTERIOR NOISE LEVELS

LAND USE	MAXIMUM L <sub>dn</sub> dBA	OPTIMUM L <sub>dn</sub> dBA
Residential	65	45-55*
Institutional	65	55
Recreation	70	60
Office-Professional	75	65
General Commercial/Industrial	80	70

\* Single Family (45); Multi-family (55).

## 2.3 EXISTING ACOUSTIC ENVIRONMENT

This section contains a detailed description of the current noise environment within the City. This description of the noise environment is based on an identification of noise sources and noise sensitive land uses, a community noise measurement survey, and noise contour maps.

To define the noise exposure, this section of the report first identifies the major sources of noise in the community. The sources of noise in Cloverdale include: Highway 101/Cloverdale Boulevard, other arterial roadways, and the Northwestern Pacific Railroad. To completely assess the noise environment in the City, noise sensitive receptors must also be identified. As mandated by the State, noise sensitive receptors include, but are not limited to, residential areas, areas containing schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use areas deemed noise sensitive by the local jurisdiction.

### 2.3.1 Noise Sources and Levels

The predominant land use in the City is residential, and should also be considered the most noise sensitive. Other noise sensitive land uses include schools and parks. Maintenance of a relatively quiet ambience is important to maintaining the overall atmosphere of the area.

The majority of noise in Cloverdale originates from motor vehicles. Some major arterial roadways pass through the City. The main roadway of concern is Highway 101/Cloverdale Boulevard. Highway 101/Cloverdale Boulevard is the most significant noise source in Cloverdale. Other roadways in the City do not have sufficient traffic volumes to generate significant noise impacts.

The noise environment for Cloverdale can be described using noise contours developed for the major noise sources within the City. The major noise source impacting the City is traffic noise. An existing noise contour map has been developed for the City as part of this noise element.

The traffic noise contour distances for existing conditions are presented in tabular format in Table 4, and shown in Exhibit 9. The 60 CNEL and 65 CNEL contours are shown on the map. These traffic noise levels were computed using the Highway Noise Model published by the Federal Highway Administration ("FHWA Highway Traffic Noise Prediction Model," FHWA-RD-77-108, December 1978). The FHWA Model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute the LEQ noise level. A computer code has been written which computes equivalent noise levels for each of the time periods used in CNEL. Weighting these noise levels and summing them results in the CNEL for the traffic projections used. The traffic volumes used to project these noise levels was derived from the "Master Environmental Assessment Transportation/Circulation Section for the City of Cloverdale", prepared by TJKM Transportation Consultants in January of 1991. The traffic mix and time distribution for Highway 101/Cloverdale Boulevard are presented in Table 2. This traffic mix data was taken from the "1988 Annual Average Daily Truck Traffic on the California State Highway System" prepared by the U.S. Department of Transportation in August of 1989.

Table 2  
TRAFFIC DISTRIBUTION PER TIME OF DAY  
IN PERCENT OF ADT FOR HIGHWAYS

VEHICLE TYPE	PERCENT OF ADT		
	DAY	EVENING	NIGHT
Automobile	65.52	10.08	8.40
Medium Truck	3.43	0.53	0.44
Heavy Truck	9.05	1.39	1.16

The traffic distribution used in the arterial roadway CNEL calculations are presented below in Table 3. These traffic distribution estimates are based upon traffic surveys, and are considered typical for residential roadways in California.

Table 3  
TRAFFIC DISTRIBUTION PER TIME OF DAY  
IN PERCENT OF ADT FOR ARTERIALS

VEHICLE TYPE	PERCENT OF ADT		
	DAY	EVENING	NIGHT
Automobile	75.51	12.57	9.34
Medium Truck	1.56	0.09	0.19
Heavy Truck	0.64	0.02	0.08



According to Table 4 below, the only identifiable noise impacts in the City of Cloverdale are those associated with the existing Highway 101/Cloverdale Boulevard, where there is some degree of land use conflict associated with the excessive noise levels along this corridor. The noise levels along the corridor may exceed 70 CNEL if less than 120 feet from the centerline of the corridor. Areas along Highway 128 and First Street will experience noise levels less than 65 CNEL. The remaining portions of the City will experience noise levels generally less than 60 CNEL. The values given in Table 4 do not take into account the effect of any noise barriers or topography that may affect ambient noise levels.

TABLE 4  
 EXISTING (1989) TRAFFIC NOISE CONTOURS

Roadway	ADT	SPEED MPH	Distance to CNEL Contour (feet)		
			70 CNEL	65 CNEL	60 CNEL
I-101/CLOVERDALE BOULEVARD					
North of I-128	11,600	55	79	169	365
South of I-128	13,500	55	87	187	404
North of 1st Street	18,600	55	108	232	500
South of 1st Street	20,400	55	115	247	532
North of Hot Spring Rd.	20,000	55	113	244	525
South of Hot Spring Rd.	18,300	55	107	230	494
I-128					
West of Cloverdale Blvd.	2,300	55	RW	RW	73
1ST STREET					
West of Cloverdale Blvd.	2,000	45	RW	RW	66
East of Cloverdale Blvd.	4,600	45	RW	RW	115
West of Crocker Rd.	3,100	45	RW	RW	89

RW - Contour falls inside the roadway right-of-way  
 ADT - Average Daily Traffic

### 2.3.2 Railroad Noise

Railroad operations within the Cloverdale General Plan Area are confined to the activities of the Northwestern Pacific Railroad (N.W.P.R.R.) Company which owns and operates approximately 9,600 feet of linear track along the eastern flank of the City. A number of residences in the vicinity of Railroad Avenue/Mulberry Street/First Street may experience intermittent excessive exterior noise levels. The "Assessment of Noise Environments Around Railroad Operations," (Wyle Laboratories Report WCR-73-5, July 1973) was used to model the train noise levels on the project site. The noise generated by a train pass-by can be divided into two components; that generated by the engine or locomotive, and that due to the railroad cars. The characteristic frequency of the engine is different than that for the cars. The effective radiating frequency is 1000 Hz for the locomotive engines, and 2000 Hz for the portion of the noise generated by the cars. The noise generated by the engine is the result of the mechanical movements of the engine parts, the combustion process, the horn if used, and to a lesser extent the exhaust system. The noise generated by the cars is a result of the interaction between the wheels and the railroad tracks. A zero source height is used for the car noise, and a source height of 10 feet above the track is utilized for the locomotive. The train noise levels are calculated by summing the noise generated by the locomotive and the noise generated by the cars.

Data on railroad operations were obtained from Mr. Jim Huffman at the Northwestern Pacific Railroad office (September 18, 1990). The railroad line is used for freight train operations only. Two freight train operations per day typically pass through the City. One train travels north between 10 p.m. and 11 p.m., and one travels south at approximately 11 p.m. The trains are not rigidly scheduled, although there are no train operations in the daytime period. The freight trains have an average of 25 cars and operate at speeds between 30 and 40 miles per hour. It was anticipated by the Operations Officer that in the near future, the operations of the freight train going through the City are to remain the same. Table 5 shows the time distribution of the trains.

TABLE 5  
 TRAIN TIME DISTRIBUTION

TIME PERIOD	----NUMBER OF TRAINS---- FREIGHT
Day	0
Evening	0
Night	2

The operational data was utilized in conjunction with the Wyle Model to project train noise levels on the project site. The results of the train noise projections are displayed in Table 6 in terms of the 60, 65 and 70 CNEL noise levels at the distances from the centerline of the tracks. The noise projections do not include the effects of topography or barriers which may reduce the noise levels.

TABLE 6  
 RAILROAD NOISE LEVELS

	Distance to CNEL Contour From Centerline of Railway (Feet)		
	70 CNEL	65 CNEL	60 CNEL
Freight train	33	115	247

The results in Table 6 indicate that the area adjacent to the Northwestern Pacific railroad tracks will be exposed to noise levels greater than 65 CNEL. It is estimated that the 65 CNEL noise contour along the existing railroad alignment extends approximately 115 feet on either side of the track. The 60 CNEL noise contour is estimated to be approximately 247 feet from the track. Those existing residences along the railroad tracks may experience intermittent excessive train noise levels during the nighttime hours (typically around 10 p.m. and 11 p.m.). The 60 and 65 CNEL railroad noise contours are also shown on the map in Exhibit 9.



### 2.3.3 Existing Aircraft Noise Levels

The Cloverdale Municipal Airport is located in the extreme southeast corner of the City. This airport operates commercial aircrafts ranging from single and twin engine general aviation aircraft to business jets. The airport's overflight impacts are concentrated along the typical or median traffic pattern flight tracks. With the traffic pattern located only on the east side of the airport, the resulting impacts on the west side are minimal.

The 1988 aircraft noise contours for the Cloverdale Municipal Airport are shown in Exhibit 10. The contours are taken from the Cloverdale Municipal Airport Master Plan Report, October 1988. The contours indicate that the aircraft noise levels are minimal and occur only in those areas closest to the airport. The existing aircraft noise levels around the airport vicinity are approximately 55 CNEL. Therefore, aircraft noise is not a significant concern.

### 2.3.4 Noise Sensitive Land Uses

The most noise sensitive land use in Cloverdale is residential development. Residential development is spread throughout the City. It is considered especially noise sensitive because (1) considerable time is spent by individuals at home, (2) significant activities occur outdoors, and (3) sleep disturbance is most likely to occur in a residential area. Additionally, the City of Cloverdale has a number of public and private educational facilities, churches, and parks that are considered noise sensitive. These facilities are generally located in the center of the City.

Noise contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contour lines shown on the map are the 60 and 65 CNEL traffic noise and railroad noise contours. The noise contours presented should be used as a guide for land use planning. The 60 CNEL contour defines the Noise Referral Zone. This is the noise level for which noise considerations should be included when making land use policy decisions. The 65 CNEL contour describes the areas for which new noise sensitive developments will be permitted only if appropriate mitigation measures are included such that the standards contained in this Noise Element are achieved.









APPENDIX I

BIOLOGICAL RESOURCES ANALYSIS



## Setting

The Cloverdale study area is located in the northern part of the Alexander Valley, in the extreme northern part of Sonoma County, between the central Coast Range hills to the west and the Mayacmas Mountains and The Geysers to the east. The town is bisected by the Russian River and Highway 101, both of which run generally north-south through this area. The study area has varied topography, ranging from the Russian River floodplain and its flat terraces in the east, to rolling hills and relatively steep drainage canyons in the west. The area has had a long history of use and disturbance to the biotic communities. Early livestock grazing and the invasion by non-native plants has almost completely altered the open grasslands, as well as having resulted in at least some clearing of natural woody cover for conversion to additional pasture, crops, and/or orchards. Substantial oak woodland remains, but even this community has been effected by grazing (altered grassland understory, reduced tree regeneration), tree cutting (firewood, clearing for pasture and other agriculture), and more intensive uses around homes and ranches.

Local development for residential and commercial endeavors (streets, buildings, parking lots, etc.) has involved further vegetation clearing (largely on the flat areas adjacent to the Russian River), and planted and escaped landscaping has resulted in a considerable amount of additional displacement of native species.

The study area is located at the northern end of the series of valleys and low plains that adjoin the Russian River, habitats which further south are known to support extensive vernal pool and other seasonal wetland habitats and several plant species of concern. Cloverdale itself is not known to contain any extensive vernal pool situations, but this area does have some seasonal wetlands and could support almost any of the regionally known species of concern.

## Existing Conditions

The study area contains a relatively typical complement of natural and naturalized plant communities, from the almost completely altered non-native annual grasslands, to mature and largely undisturbed oak and mixed evergreen forests. Brush, while present, is not abundant, and wetlands occur as scattered small pockets in addition to the main riparian corridor along the Russian River.

## General Vegetation

Much of the natural (especially the herbaceous) vegetation of the overall study area has been either completely removed or severely degraded. As is typical of most of California, the Cloverdale region has experienced a drastic decline in native grassland (converted to an often weedy annual type), has sustained local losses of riparian and oak woodlands (particularly on the valley floor), and has altered what few seasonal wetlands remain. The primary natural plant communities that remain are the various species mixes of oak woodland and some scattered brush (chaparral and scrub).

Good descriptions of the study area's typical habitats and communities are given by WESCO (1989) and LSA (1988) in detailed discussions of specific proposed local projects. Potentially at issue with regard to general vegetation is mostly the concern for possible losses of substantial acreage of remaining vegetation and the associated habitat for wildlife. The main conflict is simply one of available space. The more conversion of natural or even semi-natural terrain into built-out landscaped neighborhoods means less space and certain resources are then available to wildlife. The number and often the diversity of animal species declines.

While most of the locally occurring plant communities are relatively common in the region, such communities as native grassland, riparian and other wetlands, and to some degree oak woodland have been increasingly degraded and/or depleted, and are becoming of greater and greater concern as valuable natural amenities for local towns. The following are brief descriptions of the study



area's existing plant communities, their values, and the associated potential conflicts that could arise pending specific development plans.

### Grassland

Local grasslands are typical of those throughout the region and are predominantly annual in character, being composed by any number of introduced annual grasses (Avena, Bromus, Lolium, Cynosurus, Hordeum), weeds (Brassica, Erodium, Centaurea, Carduus, Eremocarpus, Plantago, etc.), and occasional natives. The study area does support many native grasses (Supa pulchra and lepida, Danthonia, Deschampsia, Elymus, Festuca, Sitanion, Poa, Agrostis, Melica, Hordeum) and associated wildflowers (Brodiaea, Clarkia, Calochortus, Lupinus, Nemophila, Hemizonia, Lasthenia, Orthocarpus), but rarely are they dominant. The most suitable places for remnant pockets of more natural grassland vegetation are in the openings within large woodland communities.

Herbaceous seeps and springs, wet meadows, and other isolated herbaceous wetlands are not common, but are important habitats for both plants and animals, are geographically limited, and have been historically depleted and/or degraded. Wetland habitats, whether composed of natives (Juncus, Carex, Scirpus, Typha, Epilobium, Mimulus) or exotic (Paspalum, Polygonum, Cyperus, Polypogon, Rumex) are highly productive (seeds, insects, late season water and forage) and many are protected by policies and regulations at both the state and federal levels.

Open grasslands are typically associated with the lower hillsides, generally between the Russian River floodplain and the steeper hills to the west. Much of this land has been used intensively for livestock grazing and is prime terrain for future development. Grasslands are one of the least sensitive plant communities (low native composition, greatest degree of past disturbance, closest to intensive development) and do not generally represent a significant constraint to development. Most local grasslands have been converted to a non-native annual type, and there are few sensitive plant species that are known regionally from grasslands (except as they might occur in vernal pools). However, these open areas are valuable as foraging habitat for wildlife (especially raptors) and may contain small, scattered seasonal wetlands.

Grasslands are probably the most threatened by future development since they are typically on less steep slopes and are close to the logical areas of expansion. In general, grassland habitats are not regarded as a significant constraint to development, but they do need to be examined closely on a site by site basis to determine whether or not any wetlands could be affected.

### Brush

Brush is not abundant in the study area, but is represented by small stands and some sizable areas on exposed (south-facing) ridges. The patches of brush are of varying species composition, ranging from typical chaparral of manzanita, ceanothus, chamise, etc. on hot dry, steep and rocky slopes, to a slightly more mesic coastal scrub community of bush monkeyflower, coffeeberry, poison oak, toyon, manzanita, coyote bush, and California sagebrush. Because of its relatively dry, inland setting, the study area's brush is dominated by chaparral vegetation. Brush communities, while not especially valuable alone as habitat for wildlife, do provide substantial habitat value as small pockets within an overall woodland and grassland matrix, in addition to often being the best cover for erosion control and watershed protection on steep and/or rocky sites. Chaparral is also the known community for a few sensitive species such as Rincon Ridge ceanothus (Ceanothus confusus), Rincon Ridge manzanita (Arctostaphylos stanfordiana var. repens), and Sonoma manzanita (Arctostaphylos canescens ssp. sonomensis).

### Woodland and Forest

Much of the currently undeveloped and uncultivated land in the study area (primarily the western third) supports extensive oak woodland composed of varying proportions of coast live oak, blue oak, California black oak, valley oak, interior live oak, and Oregon white oak. On north slopes, in the small drainage canyons, and on other protected sites, the oaks are mixed with California bay, madrone, Douglas-fir, and buckeye. The drier south slopes and small valleys are typically



dominated by blue and live oaks, with occasional valley oak.

The river floodplain supports some remnant oak stands in association with and also as disjunct groves away from the main riparian corridor (which contains an appreciable number of oaks itself). Most of the main floodplain and adjacent terraces have been developed and/or cultivated to the point that the remaining oaks are mainly just scattered small stands, fragmented from the larger expanses along the river and in the hills to the west, and surrounded by human and agricultural activities. This entire lowland, encompassing approximately the eastern two-thirds of the study area, probably supported a much more extensive riparian and lowland oak forest prior to settlement.

Oak woodland is very common in the region and contains few (if any) sensitive plant species. It is composed of common species, but provides good wildlife habitat, especially in association with the intermixed grasslands (even the annual types) and the riparian corridors. The woodland itself is not particularly species rich or even structurally diverse, but it is valuable for its food production (shoots, acorns, dead wood, litter), nesting sites (live and dead trees), and general cover.

### Riparian and Other Wetlands

Wetlands in the study area include the riparian woodland and thickets along the Russian River, most ephemeral drainageways and canyon bottoms, and many isolated low and poorly drained places on and around the valley floor. True riparian vegetation is restricted mainly to the Russian River, although there are scattered smaller strips along the larger tributary creeks. Most of the tributary drainages are ephemeral and support only a few riparian trees (cottonwood, willow, ash) within the overall woodland that dominates both the upland slopes and many creekbanks.

Legally defined 'wetlands' and related 'waters of the U.S.' (as defined and regulated by the U.S. Army Corps of Engineers [CE]) are not extensive aside from the Russian River floodway, and include most ephemeral creekbeds, small hillside seeps, and possibly a few scattered seasonal pools in undeveloped level areas. Associated with the Russian River itself (and its riparian vegetation) is a certain part of the floodplain that is subject to CE jurisdiction, including all of the actual floodway and most adjoining riparian woodland or thicket.

### Sensitive Features

Sensitive features present in the study area include the main riparian corridor along the Russian River (including the river, its bank vegetation, and frequently flooded portions of the adjacent floodplain), the wooded tributary corridors that feed to the Russian River from the west, and the scattered (but as yet unidentified or mapped) wetlands in the grassland communities. The plant communities are relatively common and only the riparian areas represent vegetation of high concern. Oak woodland is valuable and worthy of protection, but does not currently enjoy any formal protection under state or local laws. Blue oak woodland (and savanna) and valley oaks in general are regarded as warranting special attention, but these communities are not well represented in the area, occurring only as pockets within a primarily live oak woodland. There are no apparent serpentine or any other unusual substrates in the area, and the terrain and soils are typical of the region.

There are no known sensitive plant or animal species present in the study area (California Natural Diversity Data Base [CNDDB] 1990), nor is there any designated critical habitat for such species. Several plant species of secondary concern (see Table 1) could be present in the study area, but these generally do not pose major constraints on land use. The study area contains little in the way of known vernal pools, but such features should be expected on any of the lowland areas and if present, could support uncommon or otherwise sensitive species.

### Issues and Constraints

The study area contains relatively common natural terrain and vegetation, and presents minimal constraints with respect to biotic resources of significance. There is one biotic feature of high importance and potential constraint, this being the Russian River corridor. This area should be

avoided to the extent possible and a reasonable effort to restore portions would be a worthwhile goal. Other less significant features may be present, but would require detailed site surveys to document. The following are the main potential issues that should be addressed for most proposed developments and other drastic land use changes in the area:

### **Sensitive Habitats and Plant Communities**

The study area contains only minor plant communities regarded as sensitive, including primarily riparian woodland. Lowland sites have moderate potential for supporting small seasonal wetlands, many of which could fall under the jurisdiction of the CE. While the plant assemblages present are relatively common, some of the wet habitats are generically restricted and very valuable, and represent sensitive habitats worthy of preservation or detailed mitigation.

### **Sensitive Plant Species**

No such species are known or suspected from this area, but surveys of undeveloped properties should probably be required in order to fully document these expected conditions. Surveys should be conducted at the appropriate time(s) of year (typically in the spring), and should floristic in nature (identifying all species encountered). Species that may be found that are on List 1 of the California Native Plant Society's (CNPS) rare plant inventory (Smith and Berg 1988) should be afforded protection or at least a detailed and meaningful mitigation effort subject to the review and approval of the California Department of Fish and Game (CDFG).

### **Sensitive Wildlife Species**

The study area is not known to support any wildlife species that are officially listed at either the state or federal level, although there are several of secondary concern. These include the pallid bat, several owls, hawks, and other raptors, and possibly several waterbirds and/or species of waterfowl that might use the Russian River corridor. Such species as golden and bald eagles, black-shouldered kite, northern harrier may use parts of the study area on occasion, but would not be expected to reside or even visit the area on a regular or significant basis. Most of the sensitive animal species that might use the study area are most likely not residents, but are species that would utilize certain resources in it (riparian woodland, open water, seasonal wetlands, spring grasslands) temporarily or on occasion during annual movements.

Potential impacts from development would be minimal with respect to sensitive wildlife species, although large-scale removal of natural vegetation would result in small cumulative adverse impacts to many species of wildlife simply because of the incremental losses of available habitat.

### **Wetlands**

Specific wetland surveys will be needed to determine the presence and extent of such habitats. This should be done either on a study area-wide basis, or at least by parcel as land use changes are proposed. Legal requirements presented by CDFG and the CE will be faced by any proposed removal or filling of wetlands.

### **Tree Removal**

To a certain degree, the removal of mature trees is a potential issue to be addressed. Mature oaks should be avoided wherever possible, and a tree replacement or compensation program may be appropriate. Future proposed developments should be required to submit detailed tree surveys for areas to be heavily impacted.



Table 1. Sensitive plants potentially occurring in north-central Sonoma County

PLANT TAXON	COMMON NAME	LIST	R-E-D	FWS	CDFG
SPECIES OF PRIMARY CONCERN:					
<i>Trifolium amoenum</i>	showy Indian clover	1a	PE 1969	C2*	-
<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus	1b	3-3-3	C2	-
<i>Arctostaphylos stanfordiana</i> var. <i>repens</i>	Rincon Ridge manzanita	1b	3-3-3	-	-
<i>Astragalus clarianus</i>	Clara Hunt's milkvetch	1b	3-3-3	C2	-
<i>Blennosperma bakeri</i>	Baker's blennosperma	1b	2-3-3	C2	-
<i>Campanula californica</i>	swamp harebell	1b	1-2-3	C2	-
<i>Carex albida</i>	white sedge	1b	3-3-3	C1	E
<i>Cordylanthus tenuis</i> ssp. <i>capillaris</i>	Pennel's bird's-beak	1b	3-2-3	C2	R
<i>Downingia humilis</i>	dwarf downingia	1b	1-2-3	C3c	-
<i>Fritillaria liliacea</i>	fragrant fritillary	1b	1-2-3	C2	-
<i>Lasthenia burkei</i>	Burke's goldfields	1b	3-3-3	C2	E
<i>Legenere limosa</i>	legenere	1b	2-3-3	C2	-
<i>Lilium maritimum</i>	coast lily	1b	2-2-3	-	-
<i>Limnanthes vinculans</i>	Cunningham Marsh or Sebastopol meadowcam	1b	2-3-3	C2	E
<i>Navarretia plieantha</i>	many-flowered navarretia	1b	3-2-3	C2	E
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah	1b	1-2-3	C2	-
<i>Pleuropogon hooverianus</i>	Hoover's semaphore grass	1b	3-2-3	C2	R
<i>Rhynchospora californica</i>	California beaked rush	1b	3-3-3	C2	-
SPECIES OF SECONDARY CONCERN:					
<i>Rhynchospora globularis</i> var. <i>globularis</i>	round headed beaked rush	2	3-3-1	-	-
<i>Arctostaphylos canescens</i> var. <i>sonomensis</i>	Sonoma manzanita	3	?-?-3	-	-
<i>Hemizonia congesta</i>	hayfield tarplant	3	?-?-3	-	-
<i>Horkelia tenuiloba</i>	thin-lobed horkelia	3	?-?-3	-	-
<i>Penstemon newberryi</i> ssp. <i>sonomensis</i>	Sonoma beard tongue	3	?-?-3	-	-

Table 1. Sensitive plants potentially occurring in north-central Sonoma County

PLANT TAXON	COMMON NAME	LIST	R-E-D	FWS	CDFG
<i>Pogogyne douglasii</i> ssp. <i>parviflora</i>	Douglas' pogogyne	3	?-2-3	C2	-
<i>Trifolium grayi</i>	Gray's clover	3	?-?-3	-	-
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck	4	1-1-3	-	-
<i>Arabis blepharophylla</i>	coast rock cress	4	1-1-3	C3c	-
<i>Calamagrostis bolanderi</i>	Bolander's reed grass	4	1-1-3	-	-
<i>Calamagrostis ophitidis</i>	serpentine reed grass	4	1-1-3	-	-
<i>Cirsium walkerianum</i>	Alameda Co. thistle	4	1-1-3	-	-
<i>Cuscuta howelliana</i>	Bogg's Lake dodder	4	1-1-3	C3c	-
<i>Elymus californica</i> ( <i>Hystrix</i> c.)	California bottlebrush grass	4	1-1-3	C2	-
<i>Fritillaria agrestis</i>	stinkbells	4	1-1-3	C2	-
<i>Fritillaria purdyi</i>	Purdy's fritillary	4	1-1-3	-	-
<i>Lilium rubescens</i>	redwood lily	4	1-1-2	-	-
<i>Lomatium repostum</i>	Napa lomatium	4	1-1-3	-	-
<i>Pleuropogon davyi</i>	Davy's semaphore grass	4	1-1-3	-	-
<i>Pleuropogon refractus</i>	nodding semaphore grass	4	1-2-1	-	-
<i>Quercus lobata</i>	valley oak	4	1-2-3	-	-
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup	4	1-2-3	-	-
<i>Rhynchospora alba</i>	white beaked rush	4	1-1-1	-	-
<i>Ribes divaricatum</i> var. <i>publiflorum</i>	straggly gooseberry	4	1-1-2	-	-
<i>Ribes victoris</i>	Victor's gooseberry	4	1-1-3	-	-

## LEGEND FOR TABLE 1

**Plant Taxon:** as listed by Smith and Berg (1988).

**List:** Refers to the list number on which the plant is included in Smith and Berg (1988; California Native Plant Society's sensitive plant inventory). 1a: Plants presumed extinct (PE) in California with date last seen, 1b: Plants rare or endangered in California and elsewhere, 2: Plants rare or endangered in California, but more common elsewhere, 3: Plants about which we need more information, and 4: Plants of limited distribution [a watch list]. Appendix 1: plants considered, but not included.

**R-E-D:** rarity (R), endangerment (E), and distribution (D) code from Smith and Berg (1988) :

Rarity :

- 1 = Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
- 2 = Occurrence confined to several or one extended population(s).
- 3 = Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom seen.

Endangerment :

- 1 = Not endangered.
- 2 = Endangered in a portion of its range.
- 3 = Endangered throughout its range.

Distribution :

- 1 = More or less widespread outside California.
- 2 = Rare outside California.
- 3 = Endemic to California.

**FWS:** C1 = A candidate taxon, Category 1: information sufficient for federal listing by FWS (1985). C2 = Also a candidate, Category 2: information insufficient for formal proposal for listing. C3c = Previously considered, but currently considered to be too common for listing.

**CDFG:** E = Endangered, R = Rare, T = Threatened; as designated by CDFG (1988).

**Habitat, Elevation, Flowering Period:** As reported in Munz and Keck (1959), Munz (1968), Smith and Berg (1988), and/or Abrams and Ferris (1923 - 1951).





APPENDIX J

CULTURAL RESOURCES ANALYSIS



A. DISCUSSION OF KNOWN AND SUSPECTED CULTURAL RESOURCES LOCATED  
INSIDE THE CITY OF CLOVERDALE, SONOMA COUNTY, CALIFORNIA

PREPARED FOR STA, INC.  
150 POST STREET  
SAN FRANCISCO, CALIFORNIA

PREPARED BY MILEY PAUL HOLMAN  
HOLMAN & ASSOCIATES  
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SAN FRANCISCO, CALIFORNIA

SEPTEMBER 18, 1990

## ADMONITION

This report contains a map showing the locations of known archaeological resources located inside or near the city borders of Cloverdale. This map is meant for use only by the City of Cloverdale or persons or agencies designated by them. Publication of this map or uncontrolled access to it could lead to the vandalization or destruction of the cultural resources shown in it.

## SCOPE OF SERVICES

Under the terms of a contract entered to between STA Inc. and Holman & Associates in September, 1990, Holman & Associates agreed to provide the following information for inclusion in the Cloverdale General Plan Revision EIR:

1. Prepare a standard Phase I archaeological report. This consists of conducting archival research at the California Archaeological Inventory.
2. Note the presence of absence of either prehistoric or historic materials and map those in the general plan area.
3. Summarize the methodology employed and reports on the preliminary findings and necessary recommendations for further research or on the lack of findings.

The findings presented in this report were derived from materials received from STA Inc and from materials obtained by this author, Mr. Randy Wiberg and Ms. Sunshine Psota at the California Archaeological Inventory located at Sonoma State University. Additional undocumented information concerning cultural resource locations has been obtained from interviews with individuals acquainted with the cultural resources of the general area.

The aim of this report is to present the reader with an updated understanding of the nature and number of cultural resource locations presently known to exist inside the city borders. Utilizing this information and that gained from archaeological surveys of portions of the city, comments will be offered about the potential for the discovery of additional materials in areas not yet surveyed which may be developed in the future. Finally recommendations will be made concerning the need for future cultural resource studies in un-surveyed portions of the city.

## HISTORY OF CULTURAL RESOURCE STUDIES

Concern about cultural resources in the Cloverdale area dates back to the early days of CEQA mandated EIR's; by 1978 the City of Cloverdale General Plan EIR summarized the knowledge of the



archaeological records then in the possession of Sonoma State College. The college was not yet the designated State Historic Preservation Office Archaeological Inventory, but did possess the most extensive archaeological records of the area. At the time of the 1978 report only 1430 acres were being considered for development.

According the 1978 report there were no cultural resources recorded inside the general plan study area, and the only areas suspected of containing archaeological sites were the banks of the Russian River, in particular the western bank where at least four ethnographically recorded locations of Pomo villages were noted. Noting that only three archaeological reports had been done for the area by that date, the report went on to speculate that unknown amounts of damage would be done to cultural resources, and that archaeological surveys should be done on a project by project basis.

The general plan information was based upon a letter from the Anthropological Studies Laboratory at Sonoma State dated March 16, 1976. Addressed to Mr. Ron Dering of the Sonoma County Planning Department, Ms. Wendy Van Dusen of the Center went on to speculate that the Cloverdale area, regardless of the lack of recorded sites, had to be considered highly sensitive in terms of archaeological sites. This judgement was based primarily on the findings up to that time at the nearby Warm Springs Dam Project Area, where a total of 90 archaeological sites had been found. Additionally a total of 130 archaeological sites were found in the opposite direction at the geothermal development area to the east of the city. The assumption was that Cloverdale, being situated in a similar environment, would also have high numbers of archaeological resources.

Between 1978 and the present the City of Cloverdale indeed did proceed to have the city inspected by archaeologists on a case by case basis, with the number of field investigations increasing dramatically along with the pace of development in the 1980's. Project review done by the Archaeological Inventory located at Sonoma State University resulted in a total of 23 reports on archaeological surveys done inside the area shown on the enclosed map. Typical of the type of development happening in the city, most of these studies were done for parcels averaging 10 acres in size. Two of them were lineal studies, one for a water system, and the other for the yet to be constructed Highway 101 bypass.

It appears that all of the recorded archaeological and historic sites known for the area, 11 in number, were recorded as a result of these surveys; one project, the M.P. Rosen project (later Stonehenge) was responsible for the discovery of 4 of the 11 sites. Three of the remaining sites were recorded during a lineal survey which follows the corridor of the Northwestern Pacific Railway from the north end to the south end of town. This work was

evidently done for the proposed 101 bypass. The National Register of Historic Places through 1985 lists an additional two locations: these are the Cloverdale Railroad Station and the Simon Pinschower House at 302 North Main Street. Attempts to contact local interested historians to obtain a list of local historic sites of interest was attempted by STA Inc. have not been successful to date.

It is the opinion of this author that in total less than 20 percent of the Cloverdale has been subjected to systematic inspection for cultural resources to date. Of the 23 recorded surveys, 6 of these were responsible for recording the 11 sites known about to date. Four of these are historic: the remains of a winery and a stone house were found on the Stonehenge property, a standing 1970's farmhouse was found on another parcel, and a combined historic structure (the Asti cookhouse) and prehistoric site (a stone flake scatter) was found on the Asti property south of town.

A total of 7 prehistoric sites have been recorded inside the city borders. All defined as either flake scatters or flake scatters containing visible midden, only two of these locations have had further archaeological research done on them to help determine their constituents. Additional information has been received by this author by individuals familiar with the area about the locations of two additional prehistoric sites (a flake scatter and a possible midden area), a petroglyph site (incised stone art), and a complex of historic foundations. None of these locations have been visited by this author to date, and none of the sites have been registered with the State Historic Preservation Office.

#### SUMMARY OF FINDINGS

Based upon the discovery of 11 archaeological sites inside only 6 survey areas representing less than 10 percent of the area of the city of Cloverdale, the 1976 assumption by Sonoma State College that the area should be considered highly sensitive has been born out by the facts. As further work is done in the area, the density of both prehistoric and historic sites will probably increase. An inspection of the enclosed map shows that the distribution of these two types of cultural resources is fairly even inside the city borders. Field inspections, coupled to environmental clearance for development and road improvement, have turned up resources throughout the city area, not just along the western bank of the Russian River where they were expected.

In short, the pattern of discovery should be duplicated in the future as more land comes into development. In order to facilitate the identification and protection of these resources, the City of Cloverdale could take the following precautions:



### Prehistoric resources

The city should continue the process of having the California Archaeological review applications on a case by case basis, and if they are not doing so, should consider having this review done for agricultural conversions as well. The conversion of fallow land into vineyards can cause destruction to fragile archaeological resources, in particular the flake scatters described in this report. Flake scatters consist of utilized or un-utilized stone materials scattered on the surface of the ground, and any disturbance to such an area results in the complete destruction of the resource. Preparation of areas for planting of grapes can cause large scale grading and re-contouring, such as that which is being done south of town in the Asti area presently.

### Historic resources

Attempts should be made to augment the historic resources presently in the possession of the California Inventory. Other than the sparse listings on the National Register of Historic Places and some archival information (such as the Thompson 1977 Historical Atlas Map of Sonoma County, California), little information exists about the locations of either standing historic structures or the locations of former historic structures. Lists could be generated of locally important structures and locations utilizing local informants and additional archival information to assist the Planning Department in determining the need for additional cultural resources research in development areas whether or not the areas have been designated as sensitive by the California Archaeological Inventory. This additional data base would be extremely valuable in identifying and mitigating impacts to areas where agricultural conversions are to take place.

There is one other area of concern which should be addressed by the City of Cloverdale, in particular if development continues to the north and west into the hill areas where historic alteration or use of the land has been kept to a minimum. Some of these areas may in fact contain areas utilized by the present Pomo population for the gathering of foods or materials utilized for basket-making or for medicinal purposes. In the course of having the Warm Springs dam area inspected, the Army Corps of Engineers consulted with the local Pomo community and discovered that there were a number of locations inside the proposed dam area which were frequented by the Indians. Both CEQA and NEPA legislation address the potential significance of such resources, and require mitigation of impacts to them. In the case of Warm Springs, many of the resource areas were reconstructed outside of the flood zone to allow their continued utilization. Rather than require research on a case by case basis, the City of Cloverdale could consider conducting a regional study of those areas where historic alteration has been kept to a minimum to locate any suspected resource areas and to plan for their protection.

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